



SAMSUNG

# User Manual

Memory Camcorder






[www.samsung.com/register](http://www.samsung.com/register)

SMX-F50BN/SMX-F50RN/SMX-F50SN/SMX-F50UN  
SMX-F53BN/SMX-F53RN/SMX-F53SN/SMX-F53UN  
SMX-F54BN/SMX-F54RN/SMX-F54SN/SMX-F54UN  
SMX-F500BN/SMX-F500RN/SMX-F500SN/SMX-F500UN  
SMX-F530BN/SMX-F530RN/SMX-F530SN/SMX-F530UN

# Before reading this user manual

## SAFETY WARNINGS

What the icons and signs in this user manual mean;

 <b>WARNING</b>	There is a potential risk of death or serious injury.
 <b>CAUTION</b>	There is a potential risk of personal injury or damage to the product.
	To reduce the risk of fire, explosion, electric shock, or personal injury when using your camcorder, follow these basic safety precautions.
	Here are hints or page number references you will find helpful when you operate the camcorder.
	Settings required before using a function.

These warning signs are here to prevent injury to you and others. Please follow them explicitly. After reading this section, keep it in a safe place for future reference.

## PRECAUTIONS

### Warning!

- When using the AC power adapter with your camcorder, connect the adapter to an outlet with protective grounding.
- Do not expose the camcorder battery to direct sunlight, heaters, radiators, fire, or any source of excessive heat.

### Caution

If you replace the battery with the wrong battery, you can cause an explosion. Replace only with the same battery or an equivalent type.

If you plug the AC adapter into a 240V AC outlet, be sure to use a suitable plug adapter.

## IMPORTANT INFORMATION ON USE

### About this user manual

Thank you for purchasing this Samsung Camcorder. Please read this user manual carefully before you use the camcorder and keep it handy for future reference. Should your camcorder fail to operate correctly, refer to Troubleshooting.

**This User Manual covers models SMX-F50, SMX-F53, SMX-F54, SMX-F500 and SMX-F530.**

- The SMX-F50, SMX-F500 and SMX-F530 do not have built-in flash memory and uses memory cards. Although some features of the SMX-F50, SMX-F53, SMX-F54, SMX-F500 and SMX-F530 models are different, they operate in the same way.
- Illustrations of model SMX-F50 are used in this user manual.
- The displays in this user manual may not be exactly the same as those you see on the LCD screen.**
- Designs and specifications of the camcorder and other accessories are subject to change without any notice.**
- In this user manual's function description tables, the icon shown in the on-screen display column will appear on the screen when you set the corresponding function.**
- Ex) TV Super Fine - "Video Resolution" Submenu item  
➡ page 47

Item	Use	On-screen display
"TV Super Fine"	Videos recorded in 720x480 (60i) resolution at super-fine image quality.	

If you set TV Super Fine, the corresponding icon () will appear on the screen.

- Descriptions of the “built-in memory” in this user manual apply only to the following models: SMX-F53 (8GB), SMX-F54 (16GB).

**The following terms are used in this manual:**

- ‘Scene’ refers to the point where you press the Record Start/ Stop button to start recording until you press again to pause the recording.
- The terms ‘photo’ and ‘still image’ are used interchangeably with the same meaning.

## Before using this camcorder

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- **This camcorder records video in H.264 (MPEG4 part10/AVC) format and in Standard Definition Video (SD-VIDEO).**
- **You can play back and edit the video recorded by the camcorder on a personal computer using the internal software of this camcorder.**
- **Please note that this camcorder is not compatible with other digital video formats.**
- **Before recording important video, make a trial recording.**  
Play back your trial recording to make sure the video and audio have been recorded properly.
- Recorded contents may be lost due to a mistake when handling this camcorder or memory card, etc. Samsung will not provide compensation for damages due to the loss of recorded contents.
- **Make a backup of important recorded data.**  
Protect your important recorded data by copying the files to a PC. We also recommend you copy it from your PC to other recording media for storage. Refer to the software installation and USB connection guide.
- **Copyrights: Please note that this camcorder is intended for individual use only.**  
Data recorded on the storage media in this camcorder using other digital/analog media or devices is protected by the Copyright Act and cannot be used without permission of the owner of the copyright, except for personal enjoyment. Even if you record an event such as a show, performance, or exhibition for personal enjoyment, we strongly recommend that you obtain permission beforehand.
- For Open Source licences information, refer to the “Opensource-F50.pdf” in the provided CD-ROM



## Notes regarding trademarks

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- All the trade names and registered trademarks mentioned in this manual or other documentation provided with your Samsung product are trademarks or registered trademarks of their respective holders.
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# Important safety instructions

	<b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN	
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		



This symbol indicates that dangerous voltage consisting a risk of electric shock is present within this unit.



This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

## Warning

To Reduce The Risk Of Fire Or Electric Shock, Do Not Expose This Apparatus To Rain Or Moisture.

## Caution

Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

To disconnect the apparatus from the mains, the plug must be pulled out from the mains socket, therefore the mains plug shall be readily operable.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachment/accessories specified by the manufacturer.

12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.
16. VENTILATION:

Slots and openings in the cabinet are provided for ventilation to ensure reliable operation of the CAMCORDER and to protect it from overheating. These openings must not be blocked or covered. Never place your CAMCORDER on a bed, sofa, rug, or other similar surface: on or near a radiator or heat register. This CAMCORDER should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.



### 17. POWER SOURCES:

The CAMCORDER should be operated only from the type of power source indicated on the label. If you are not sure of the type of power supply at your home, consult your appliance dealer or local power company. A CAMCORDER is intended to be operated from battery power, or other sources, refer to the operating instructions.

### 18. GROUNDING OR POLARIZATION:

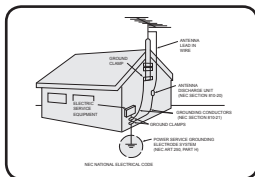
This CAMCORDER may be equipped with either a polarized 2-wire AC line plug (a plug having one blade wider than the other) or a 3-wire grounding type plug, a plug having a third (grounding) pin. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still fails to fit, contact your electrician to replace your outlet. Do not defeat the safety purpose of the polarized plug.

### 19. POWER-CORD PROTECTION:

Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords or plugs, convenient receptacles, and the point where they exit from the unit.

### 20. OUTDOOR ANTENNA GROUNDING:

CAMCORDER, be sure the antenna or cable system is grounded to provide some protection against voltage surges and built-up static charges, Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire and supporting structure, grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding to conductors, location of antenna-discharge unit, connection to grounding electrodes and requirements for the grounding electrode. See figure below.



### 21. LIGHTNING:

For added protection of this CAMCORDER during a lightning storm or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the CAMCORDER due to lightning and powerline surges.

### 22. POWER LINES:

An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

### 23. OVERLOADING:

Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

### 24. OBJECTS AND LIQUIDS:

Never push objects of any kind into this CAMCORDER through openings as they may touch dangerous voltage points or short out a part that could result in a fire or electric shock. Never spill liquids of any kind onto the CAMCORDER. Should spillage occur, unplug unit and have it checked by a technician before use.

### 25. SERVICING:

Do not attempt to service this CAMCORDER yourself. Opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

### 26. DAMAGE REQUIRING SERVICE:

Unplug this CAMCORDER from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- When the power-supply cord or plug is damaged.
- If any liquid has been spilled onto, or objects have fallen into the CAMCORDER.
- If the CAMCORDER has been exposed to rain or water.
- If the CAMCORDER does not operate normally by following the operating instructions, adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the CAMCORDER to its normal operation.
- If the CAMCORDER has been dropped or the cabinet has been damaged.
- When the CAMCORDER exhibits a distinct change in performance, this indicates a need for service.

### 27. REPLACEMENT PARTS:

When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer and having the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

### 28. SAFETY CHECK:

Upon completion of any service or repairs to this CAMCORDER, ask the service technician to perform safety checks to determine that the CAMCORDER is in safe operating order.

29. To prevent damage which may result in fire or shock hazard, do not expose this appliance to rain or moisture.

30. If this power supply is used at 240V ac, a suitable plug adaptor should be used.

### USER INSTALLER CAUTION:

Your authority to operate this FCC certified equipment could be voided if you make changes or modifications not expressly approved by this party responsible for compliance to part 15 FCC rules.

### NOTE:

**(Hg)** LAMP(S) INSIDE THIS PRODUCT CONTAIN MERCURY AND MUST BE RECYCLED OR DISPOSED OF ACCORDING TO LOCAL, STATE OR FEDERAL LAWS. For details see [lamprecycle.org](http://lamprecycle.org), [eiaa.org](http://eiaa.org), or call 1-800-Samsung (7267864)

### CALIFORNIA USA ONLY

**This Perchlorate warning applies only to primary CR (Manganese Dioxide) Lithium coin cells in the product sold or distributed ONLY in California USA**

**“ Perchlorate Material - special handling may apply, See [www.dtsc.ca.gov/hazardouswaste/perchlorate](http://www.dtsc.ca.gov/hazardouswaste/perchlorate).”**

### NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help and for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: “How to Identify and Resolve Radio-TV Interference Problems.” This Booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock No. 004-000-00345-4.

### FCC Warning

The user is cautioned that changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

This device complies with Part 15 of FCC Rules.

Operation is subject to the following two conditions;

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

# Safety information

The safety precautions illustrated below are to prevent personal injury or material damages. Heed all instructions carefully.



## WARNING

Means that there is a potential risk of serious personal injury.



## CAUTION

Means that there is a potential risk of personal injury or damage to the product.



Prohibited action.



Do not touch the product.



Do not disassemble the product.



Unplug from the power supply.



This precaution must be followed.



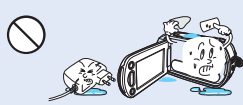
## WARNING



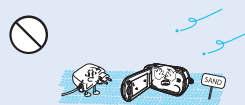
Do not overload outlets or extension cords as this may result in abnormal heat or fire.



Using the camcorder at temperatures over 60°C (140 °F) may result in fire. Keeping the battery at a high temperature may cause an explosion.



Do not allow water or metal and inflammable matter to enter the camcorder or AC power adaptor. Doing so may pose a fire hazard.



No sand or dust! Fine sand or dust entering the camcorder or AC power adaptor could cause malfunctions or defects.



No oil! Oil entering the camcorder or AC power adaptor could cause electric shock, malfunctions or defects.



Do not aim the camcorder directly into the sun. Doing so could cause eye injuries, as well as lead to malfunctioning of internal parts of the product.



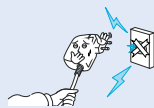
Do not bend the power cord or damage the AC power adaptor by pressing on it with a heavy object. There may be a risk of fire or electric shock.



Do not disconnect the AC adaptor by pulling on its power-cord, as this could damage the power-cord.



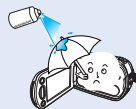
Do not use the AC adaptor if it has damaged, split or broken cords or wires. Doing so may cause fire or electric shock.



Do not connect the AC adaptor unless the plug can be fully inserted with no part of the blades exposed.



Do not dispose of battery in a fire as it may explode.



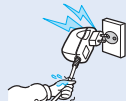
Never use cleaning fluid or similar chemicals to clean the camcorder. Do not spray cleaners directly on the camcorder.



Keep the camcorder away from water when using it near the beach or pool or when it rains. There is a risk of malfunction or electric shock.



Keep the used lithium battery or memory card out of the reach of children. If the lithium battery or memory card is swallowed by a child, consult physician immediately.



Do not plug or unplug the power cord with wet hands. There is a risk of electric shock.



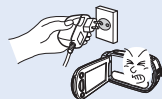
Keep the power-cord unplugged when not in use or during lightning storms. There is a risk of fire.



When cleaning the AC adaptor, unplug the power-cord. There is a risk of malfunction or electric shock.



If the camcorder emits an abnormal sound or smell, or smokes, unplug the power-cord immediately and request service from a Samsung service center. There is a risk of fire or personal injury.

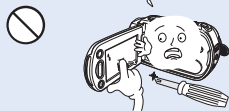


If the camcorder malfunctions, immediately detach the AC adaptor or battery from the camcorder. There is a risk of fire or injury.

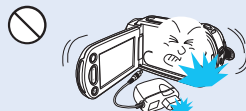


Do not attempt to disassemble, repair, or modify the camcorder or the AC adaptor to avoid a risk of fire or electric shock.

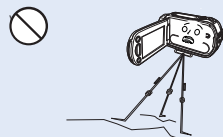
## ⚠ CAUTION



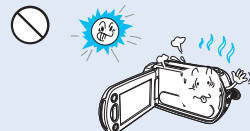
Do not press the surface of the LCD with force, or hit it with a sharp object. If you push the LCD surface, display unevenness may occur.



Do not drop or expose the camcorder, battery, AC adaptor or other accessories to severe vibrations or impact. This may cause a malfunction or injury.



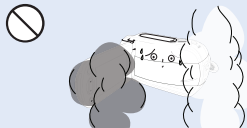
Do not use the camcorder on a tripod (not supplied) in a place where it is subject to severe vibrations or impact.



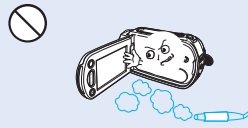
Do not use the camcorder near direct sunlight or heating equipment. This may cause a malfunction or injury.



Do not leave the camcorder in a closed vehicle for a long time where the temperature is very high.



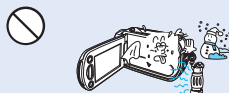
Do not expose the camcorder to soot or steam. Thick soot or steam could damage the camcorder case or cause a malfunction.



Do not use the camcorder near dense exhaust gas generated by gasoline or diesel engines, or corrosive gas such as hydrogen sulphide. Doing so may corrode the external or internal terminals, disabling normal operation.



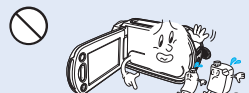
Do not expose the camcorder to insecticide. Insecticide entering the camcorder could cause the product to fail to operate normally. Turn the camcorder off and cover it with vinyl sheet, etc. before using insecticide.



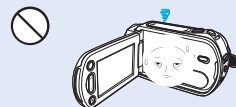
Do not expose the camcorder to sudden changes in temperature or high humidity. There is also a risk of defect or electric shock when using outdoors during lightning storms.



Do not place the camcorder down on the open LCD screen.



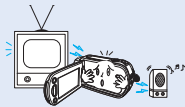
Do not wipe the camcorder body with benzene or thinner. The exterior coating could peel off or the case surface could deteriorate.



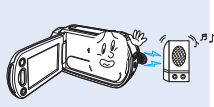
Do not leave the LCD screen open when not using the camcorder.



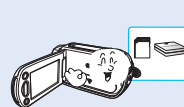
Do not hold the camcorder by the LCD screen when lifting it. The LCD screen could detach and the camcorder may fall.



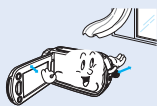
Do not use the camcorder near a TV or radio. Interference from the camcorder could cause noise on the TV or in the radio broadcast.



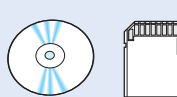
Do not use the camcorder near sources of strong radio waves or magnetic fields such as speakers and large motors. Noise from these sources could distort the video or audio you are recording.



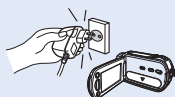
Use Samsung-approved accessories only. Using products from other manufacturers may cause overheating, fire, explosion, electric shock or personal injuries caused by abnormal operation.



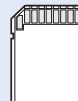
Place the camcorder on a stable surface that is well ventilated.



Keep important data separately. Samsung is not responsible for data loss.



Only plug the adaptor plug into a socket that is easily accessible. If any problem occurs with the product, you must pull the plug out of the socket to disconnect the power completely. Turning off the power button on the product does not completely.



Other manufacturers of optional accessories compatible with this camcorder are responsible for their own products. Use the optional accessories according to the safety instructions. Samsung is not responsible for any malfunction, risk of fire, electric shock, or damages caused by using unauthorized accessories.

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# Quick start guide

This quick start guide introduces the basic operation and features of your camcorder. See the reference pages for more information.

## You can record videos in H.264 format!

You can record videos in H.264 format that is convenient to email and share with your friends and family.

You can also take photos with your camcorder.

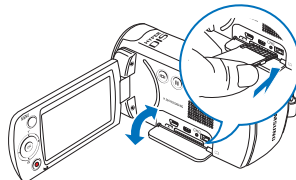
### STEP 1: Get ready

- 1 Insert the battery into the battery slot. ➔page 18
  - Insert the battery into the battery slot until it softly clicks.

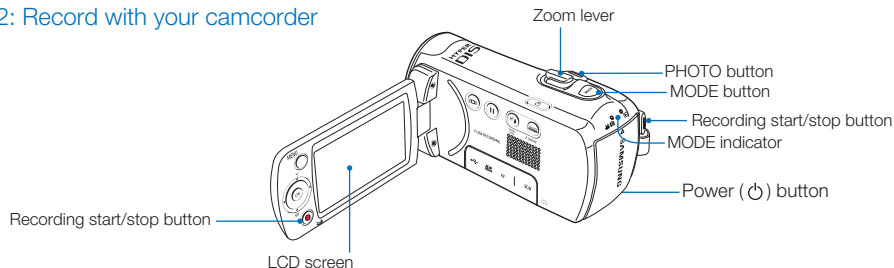


- 2 Charge the battery fully.
  - The battery is fully charged when the CHG (charging) indicator turns green. ➔Page 20

- 3 Insert a memory card. ➔page 31
  - You can use commercially available SDHC (SD High Capacity) or SD memory cards with this camcorder.
  - Set the appropriate storage media. ➔page 30 (SMX-F53/F54 only)





### STEP 2: Record with your camcorder



## Recording videos



Your camcorder uses advanced H.264 compression technology to give you the clearest video quality.

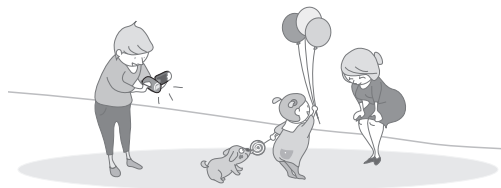
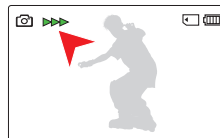
1. Open the LCD screen and press the **Power** (  ) button to turn on the camcorder.
  - Set the lens cover open/close switch to open (  ). ➔page 11
2. Press the **Recording start/stop** button.
  - To stop recording, press the **Recording start/stop** button.



## Recording photos

Your camcorder can record high quality photos with a 4:3 or 16:9 aspect ratio.

1. Open the LCD screen and press the **Power** (  ) button to turn on the camcorder.
  - Set the lens cover open/close switch to open (  ). ➔page 11
2. Fully press the **PHOTO** button when the subject is in focus.



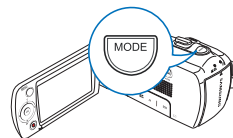
- You can record videos in SD (standard definition) quality. The default setting is “**TV Fine 720x480(60i).**” ➔ page 47
- You cannot take photos while you are recording videos.

## STEP 3: Play back videos or photos

### Viewing videos or photos on the LCD screen

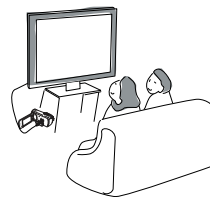
You can find recordings quickly by using the thumbnail index view.

1. Press the **MODE** button to select the Play mode.
  - The thumbnail index view appears. The thumbnail of the latest created or played file is highlighted.
2. Select the Video or Photo thumbnail index view screen.
  - You can easily switch between video and photo thumbnail view using the zoom lever.
3. Use the **Control (Up/Down/Left/Right)** button to select a desired video or photo, and then press the **Control (OK)** button.



### Viewing on a TV

You can enjoy detailed, brilliant quality videos on a connected TV. ➡ pages 92–93



## STEP 4: Save recorded videos / photos

### Simple and fun! Use the built-in Intelli-studio program with your Windows computer to edit and share your videos and photos.

Using the Intelli-studio program built in to your camcorder, you can import videos and photos into your computer and edit or share the videos and photos with your friends and family. For details, see pages 97–100.




## Importing and viewing videos/photos from the camcorder to your PC

1. Launch the Intelli-studio program by connecting the camcorder to your PC with a USB cable.
  - A new file saving screen appears with the Intelli-studio main window. Click **"Yes"**, and the uploading procedure starts.
2. The new files are saved to your PC and registered to **"Contents Manager"** on the Intelli-studio program.
  - You can arrange the files by different options such as Face, Date, Location, etc.
3. Double-click on the file you would like to playback.

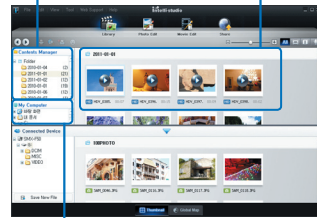
## Sharing the videos/photos onto YouTube/Flickr/Facebook

Share your contents with the world by uploading photos and videos directly to a web site with a single click.

Click the **"Share"** → **"Upload"** tab on the browser. ➡ page 100

 Intelli-studio runs automatically when you connect the camcorder to a Windows computer (if you have set **"PC Software: On"**). ➡ page 89

Contents Manager      Saved files into your PC



Folders directory on your PC

## STEP 5: Delete videos or photos

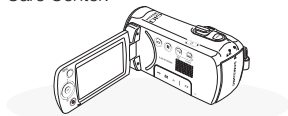
If the camcorder's storage media is full, you cannot record new videos or photos. Delete videos or photos you have saved to your computer from the camcorder's storage media. Then you can record new videos or photos on newly freed up space.

Press the **MODE** button to switch to **Play** mode, then → **MENU** button → **"Delete."** ➡ page 69


# Getting to know the camcorder

## WHAT'S INCLUDED WITH YOUR CAMCORDER

Your new camcorder comes with the following accessories. If any of these items is missing from your box, call Samsung's Customer Care Center.



Model name	Color	Built-in memory	Memory card slot	LCD screen	Lens
SMX-F50BN	Black	-	Yes	Color	52x (Optical), 65x (Intelli), 2200x (Digital)
SMX-F50RN	Red				
SMX-F50SN	Silver				
SMX-F50UN	Blue				
SMX-F53BN	Black	8GB			
SMX-F53RN	Red				
SMX-F53SN	Silver				
SMX-F53UN	Blue				
SMX-F54BN	Black	16GB			
SMX-F54RN	Red				
SMX-F54SN	Silver				
SMX-F54UN	Blue				
SMX-F500BN	Black	-			
SMX-F500RN	Red				
SMX-F500SN	Silver				
SMX-F500UN	Blue				
SMX-F530BN	Black				
SMX-F530RN	Red				
SMX-F530SN	Silver				
SMX-F530UN	Blue				

 Although some features of the models are different, they operate in the same way.

## Checking your accessories



### Battery

IA-BP105R:SMX-F50/F500/F530  
(AD43-00201A)  
IA-BP210R:SMX-F53/F54  
(AD43-00200A)



**AC power adaptor**  
(AA-MA9 type)  
(AD44-00151A)



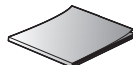
**Audio/Video cable**  
(AD39-00184A)



**USB cable**  
(AD39-00169A)



**User manual CD**  
(AD46-00369A)



**Quick start guide**  
(AD68-05837A)

## Optional accessories



**Carrying case**  
(AD69-00929A)



**Memory card**



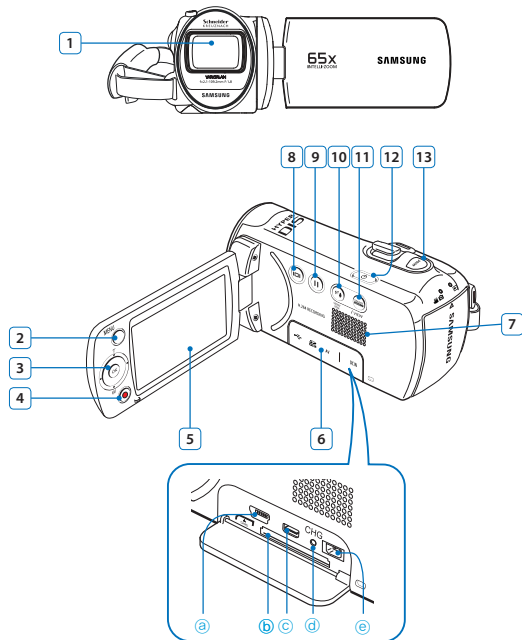
**External battery charger**  
(IA-BC9UA4)



- The exact appearance of each item may vary by model.
- The contents may vary depending on the sales region.
- Parts and accessories are available for purchase at your local Samsung dealer. SAMSUNG is not responsible for reduced battery life time or malfunctions caused by any unauthorized use of accessories such as the AC adaptor or the batteries.
- You can purchase additional batteries(IA-BP210E/IA-BP420E) from Samsung authorized service center.
- A memory card is not included. See page 32 for memory cards compatible with your camcorder.
- Your camcorder includes a user manual CD and a quick start guide (printed).

## LOCATION OF CONTROLS

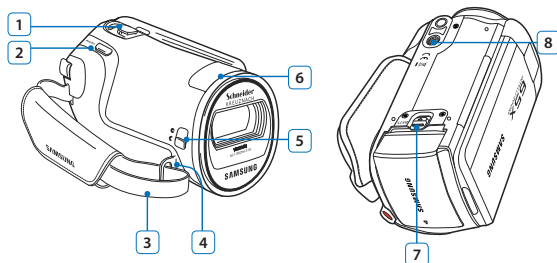
### Front & Left



- |    |   |
|----|---|
| 1  | Lens  |
| 2  | MENU button   |
| 3  | Control (Up/Down/Left/Right/OK) button, Zoom (T/W) button   |
| 4  | Recording start/stop button   |
| 5  | LCD screen  |
| 6  | Memory card/Jack cover <ul style="list-style-type: none"> <li>a USB jack (↔)</li> <li>b Memory card slot</li> <li>c AV jack (AV)</li> <li>d CHG (charging) indicator</li> <li>e DC IN jack (DC IN)</li> </ul> |
| 7  | Built-in speaker  |
| 8  | Display (☺) button  |
| 9  | Continuous REC. (Ⓜ) button  |
| 10 | Back Light (☼) button / Smart BGM button  |
| 11 | SMART AUTO (SMART AUTO) button / i VIEW button  |
| 12 | Power (⏻) button  |
| 13 | MODE button   |



### Right Top & Bottom

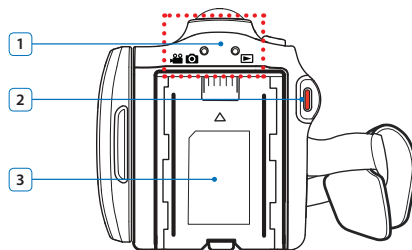


- 1** Zoom lever (T/W)
- 2** **PHOTO** button
- 3** Strap
- 4** Strap hook
- 5** Lens cover open (☺)/close (☹) switch
- 6** Internal microphone
- 7** Battery release switch (**BATT.**)
- 8** Tripod receptacle



Be careful not to cover the internal microphone and lens during recording.

### Rear



- 1** Mode indicator  
 : Record mode (Video/Photo)  
 : Play mode
- 2** Recording start/stop button
- 3** Battery slot

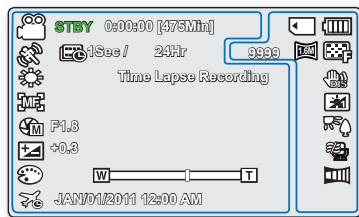
## IDENTIFYING THE SCREEN DISPLAYS

The available functions vary depending on the selected operation mode. Different indicators appear depending on the setting values.



- The On Screen Display (OSD) below only appears when the camcorder is in Record (📹📷) mode.
- Press the **MODE** button to select the Record (📹📷) mode. ➡ page 24

### Video and Photo record mode



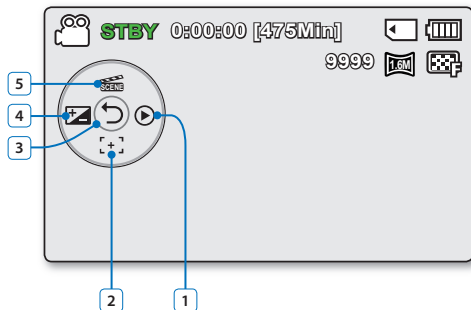
- The on-screen indicators are based on an 16GB SDHC memory card capacity.
- The settings for functions marked with \* are not retained when the camcorder is turned off and on again.
- For enhanced performance, the display indications and the order are subject to change without prior notice.
- This camcorder provides one combined video and photo record mode. You can easily record videos or photos in the same mode without having to change it.
- The total number of recordable photos is based on the available space on the storage media.
- The maximum number the photo counter can display is 9,999.

### Left of the LCD screen

Indicator	Meaning
	Record mode (Video/Photo)
<b>STBY</b> / ●	Operating mode (standby/ recording)
00:00:00 [475Min]	Time counter (Video recording time: remaining recordable time)
	SCENE / Smart Auto
	Time Lapse REC *
	White Balance
	Manual Focus*, Face Detection*
F1.8 /  1/30 /  1/30	Manual Aperture* / Manual Shutter Speed* / C.nite *
0.3	EV (Exposure Value)*
	Zoom (Optical Zoom / Intelli-Zoom / Digital Zoom)
	Digital Effect
	Time Zone
JAN01/2011 12:00 AM	Date/Time Display

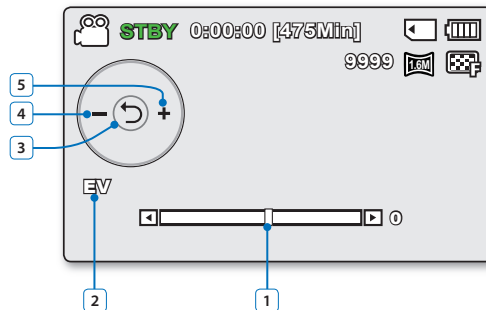
### Right of the LCD screen

Indicator	Meaning
/	Storage media (Memory card or built-in memory (SMX-F53/F54 only))
	Battery info. (Remaining battery level)
/	Photo Resolution / Video Resolution
	Anti-Shake (HDIS)
	LCD Enhancer *
	Back Light
	Wind Cut
	Fader *



### Video and Photo record mode : Shortcut menu (OK Guide)

1		Quick View
2		Focus* (Auto Focus/Face Detection / Manual Focus)
3		Shortcut menu (OK Guide) / Return
4		EV (Exposure Value)*
5		iSCENE



### Video and Photo record mode : Shortcut menu (Manual)

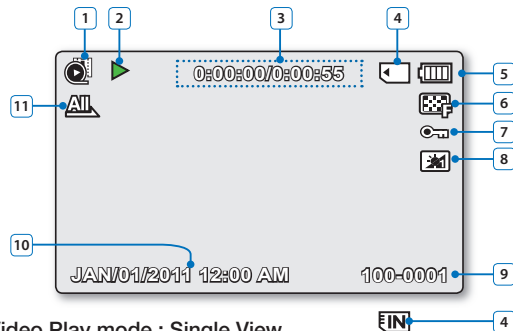
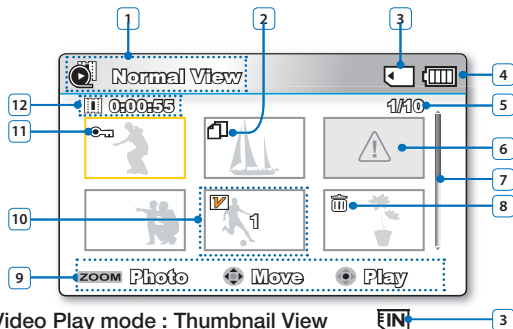
1		Manual Control Bar/ Value
2		Menu name
3		Shortcut menu (OK Guide) / Return
4		Value adjust (down)
5		Value adjust (up)



- The illustration above shows the EV (Exposure Value) screen.
- The settings for functions marked with \* are not retained when the camcorder is turned off and on again.
- The shortcut menu (OK guide) represents the most frequently accessed functions for the selected mode. Pressing the OK button will display a shortcut menu of frequently used functions on the LCD screen.

## Video Play mode

- ✓ The On Screen Display (OSD) below appears in Video play (🎞️) mode only.
- Press the **MODE** button to select the Play (🎞️) mode. ➔ page 24

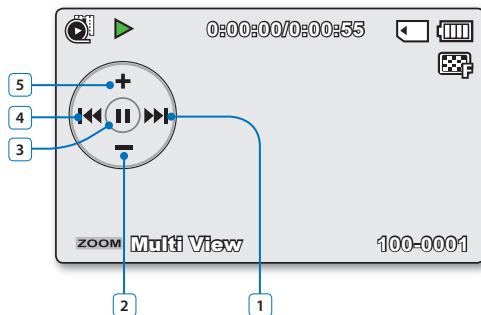


Video Play mode : Thumbnail View

1		Video Play mode
2		Copy Selected (SMX-F53/F54 only)
3		Storage media (Memory card or built-in memory - SMX-F53/F54 only)
4		Battery info (Remaining battery level)
5		Now / Total file number
6		Error File
7		Scroll bar
8		Delete Selected
9		Button Guide
10		Edit (Combine)
11		Protection
12		Recorded time

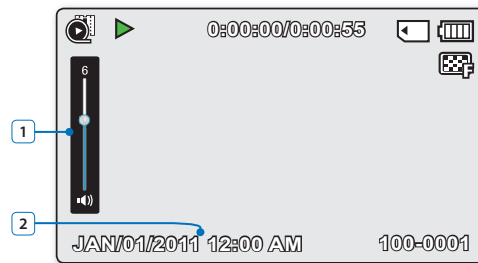
Video Play mode : Single View

1		Video Play mode
2		Play Status (Play (▶) / Pause (⏸) / Search (⏮ / ⏭) / Frame-by-frame (⏪ / ⏩) / Slow motion (⏴ / ⏵))
3		Time code (Elapsed time / Recorded time)
4		Storage media (Memory card or built-in memory (SMX-F53/F54 only))
5		Battery info (Remaining battery level)
6		Video Resolution
7		Protection
8		LCD Enhancer
9		File Name (File number)
10		Date/Time Display
11		Play Option



### Video Play mode : Shortcut menu (OK Guide)

1	▶▶	Forward playback search ↘ page 42 (Skip/Search/Slow motion/Frame-by-frame)
2	—	Volume Down
3		Play (▶) / Pause (  )
4	◀◀	Reverse playback search ↘ page 42 (Skip/Search/Slow motion/Frame-by-frame)
5	+	Volume Up



### Video Play mode : Single (Volume)

1	Volume Bar
2	JAN/01/2011 12:00 AM Date/Time Display

## Photo play mode

- This On Screen Display (OSD) below appears in Photo Play (📷) mode only
- Press the **MODE** button to select the Play (📷) mode. → page 24

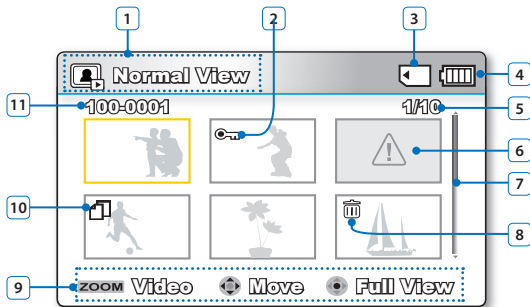


Photo Play mode : Thumbnail View

1	📷	Photo Play mode
2	🔒	Protection
3	💾	Storage media (Memory card or built-in memory - SMX-F53/F54 only)
4	🔋	Battery info (Remaining battery level)
5	1/10	Now / Total file number
6	⚠️	Error File
7	📏	Scroll bar
8	🗑️	Delete Selected
9	ZOOM Video Move Full View	Button Guide
10	📄	Copy Selected (SMX-F53/F54 only)
11	100-0001	File Name (File number)

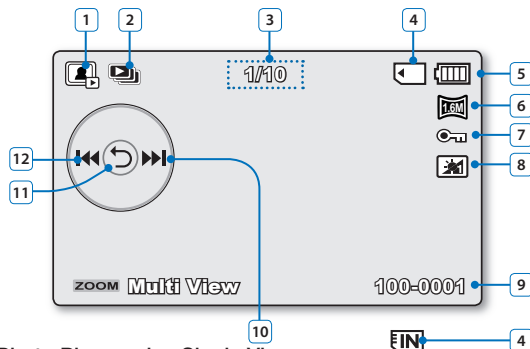



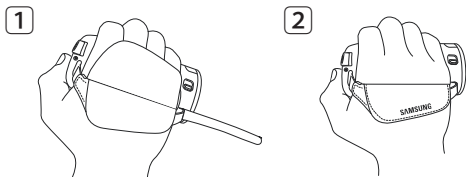
Photo Play mode : Single View

1	📷	Photo Play mode
2	📺	Slide Show
3	1/10	Image counter (Current image / total number of recorded images)
4	💾	Storage media (Memory card or built-in memory (SMX-F53/F54 only)
5	🔋	Battery info (Remaining battery level)
6	🖼️	Photo Resolution
7	🔒	Protection
8	🖼️	LCD Enhancer
9	100-0001	File Name (File number)
10	➡️	OK Guide (Next image)
11	↺️	Shortcut menu (OK Guide) / Return
12	⏮️	OK Guide (Previous image)

### ATTACHING THE STRAP

Adjust the length of Strap so that the camcorder is stable when you press the Recording start/stop button with your thumb.

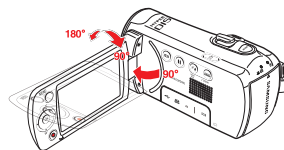
 Please note: If the hand strap is adjusted too tightly and you use excessive force to insert your hand, the hand strap hook of the camcorder may be damaged.





### ADJUSTING THE LCD SCREEN

The wide LCD screen on your camcorder offers high quality image viewing.

1. Open the LCD screen with your finger.
  - The screen opens up to 90°.
2. Rotate the LCD screen towards the lens.
  - You can rotate it up to 180° towards the lens and up to 90° backwards. To view recordings more conveniently, rotate the screen by 180° towards the lens, then fold it back to the body.



 Excessive rotation may damage the connective hinge between the screen and the camcorder.

-  When the LCD screen is rotated by 180°, the left and right sides of the subject are shown in reverse, which produces a horizontally flipped image.
- Remove fingerprints or dust on the screen with a soft cloth.
  - To adjust the LCD brightness and color, refer to the page 85.
  - Samsung's super fine LCD technology activates about 99.99% pixels on the LCD screen. Although one or two black dots or bright dots (red, blue, white) could appear on the screen, this is not a malfunction and does not affect the recorded image.

### USING THE BATTERY

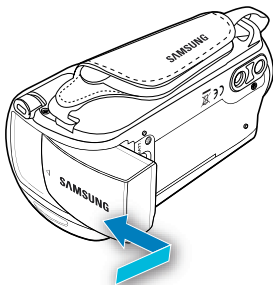
We recommend you purchase one or more additional batteries to allow continuous use of your camcorder.

- Be sure to charge the battery before you start using your camcorder.
- The battery may be charged a little at the time of purchase.

#### Battery insertion/ejection

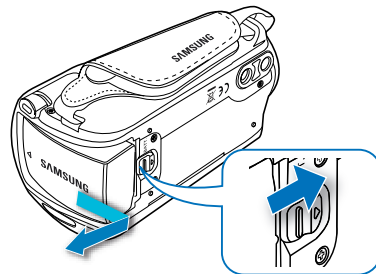
##### To insert the battery

1. Insert the battery into the battery slot until it softly clicks.
  - Make sure that the SAMSUNG logo on the battery is facing you when the camcorder is placed as shown in the figure.



##### To eject the battery

1. Gently push the **Battery release** switch in the direction shown in the diagram to eject the battery.
2. Push down, and then lift the battery out in the direction shown in the diagram.



- Use only Samsung-approved batteries. Do not use batteries from other manufacturers. Otherwise, there is a danger of overheating, fire or explosion.
- Samsung is not responsible for problems caused by unapproved batteries.
- Remove the battery from the camcorder when the camcorder is not in use.



## CHARGING THE BATTERY

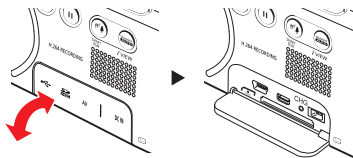
- Charge the battery before using the camcorder.
  - Use only the provided battery and AC adaptor.
1. Press the **Power** (⏻) button to turn off the camcorder.  
➡ page 23
  2. Insert the battery into the camcorder. ➡ page 18
  3. Open the connector cover of the unit.
  4. Charge the battery using the **AC power adaptor or USB cable**.
    - The CHG (charge) lamp lights up and charging starts. When the battery is fully charged, the charging (CHG) lamp turns green. ➡ page 20

### Using the AC power adaptor

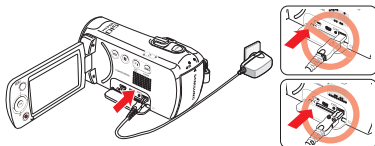
Connect the AC power adaptor to the camcorder properly, and then plug the AC power adaptor into the wall outlet.

### Using the USB cable

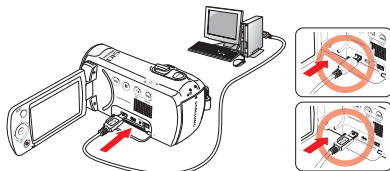
Connect the USB cable to the camcorder properly, and then connect the other end to a USB port of a PC.



## Connecting the AC power adaptor



## Connecting the USB cable



- Charging the battery at low temperature may take longer or the battery may not charge fully (green indicator will not turn on).
- Please make sure that there are no foreign substances on the plug or in the socket when you connect the AC power supply to the camcorder.
- When using the AC power supply, place it close to the wall outlet. If you experience a malfunction while using the camcorder, separate the AC power supply immediately from the wall outlet.
- Do not use the AC power supply in a tight space, such as between furnishings.



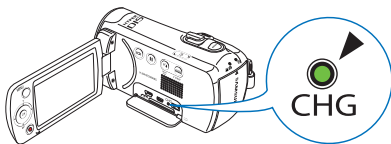
- When recording indoors with a wall outlet available, it is convenient to use the AC power supply instead of the battery.
- We recommend you charge the battery in a place with an ambient temperature between 10°C ~ 30°C (50°F and 86°F).
- When charging, if both the USB cable and AC power adaptor are connected, the AC power adaptor will override the USB.
- If the camcorder is turned on, the battery will still charge, but more charging time will be needed. We recommend you keep the camcorder turned off while it charges.

### CHECKING THE BATTERY STATE

You can check the charging state and remaining battery capacity.

#### To check the charging state

The color of the CHG lamp indicates the power or charging state.



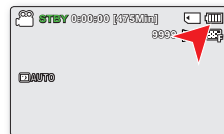
#### Charging (CHG) lamp

The color of the charging indicator shows the charging state.

Charging state	Charge		
	Charging	Fully Charged	Error
LED color	● (Orange)	● (Green)	☀ (Orange Blink)

#### Battery level display

The battery level display shows the amount of battery power remaining in the battery.



Battery Level Indicator	State	Message
	Fully charged (100%~75%)	-
	75%~50%	-
	50%~25%	-
	25%~5%	-
	less than 5%	-
	Exhausted (flickers): The device will soon turn off. Change the battery as soon as possible.	-
-	(flickers): The device will be forced to turn off after 3 seconds.	<b>"Low battery"</b>



Above figures are based on a fully charged battery at normal temperature. Low ambient temperature may affect the use time.

### Available charging and running time for the battery

Battery Type		IA-BP105R (SMX-F50/F500/F530)	IA-BP210R (SMX-F53/54)
Charging time	Using the AC power adaptor	approx. 110 min.	approx. 240 min.
	Using the USB cable	approx. 190 min.	approx. 350 min.
Video Resolution		SD	
Continuous recording time		approx. 120 min.	approx. 240 min.
Playback time		approx. 135 min.	approx. 270 min.

(Unit: minutes.)

### Continuous Recording (without zoom)

The continuous recording time shows the available recording time when you record without using any other function after recording starts.

The battery may discharge 2-3 times faster than this reference if you use the record start/stop, the zoom, and the play functions. Prepare additional batteries with the expectation that the actual recording time is about 1/3 to 1/2 of the times listed above.

### Using an AC power source

We recommend that you use the AC power adaptor to power the camcorder from a household AC outlet when recording and playing the camcorder indoors. The connection is the same as that for battery charging. ➡page 19

- Charging time: Approximate time in minutes required to fully charge a completely exhausted battery.
- Recording/Playback time: Approximate time available when you have fully charged the battery.  
'HD' stands for high definition image quality and 'SD' stands for standard image quality.
- The time is only for reference. Times shown above are measured under Samsung's test conditions. Your times may differ, depending on your usage and conditions.
- The recording and playback times will be shorter when you use your camcorder in low temperatures.

### About the battery

#### • Battery Properties

A lithium-ion battery is small-sized and has a high capacity. Low ambient temperature (below 10°C (50°F)) may shorten its usage time and affect its function. Before recording in low temperatures, put the battery into your pocket to warm it, then install it in the camcorder.

#### • Make sure to store the battery separately after use.

- A small amount of battery power is consumed when the battery is stored in the camcorder even if the camcorder power is off.
- The battery may be completely discharged, if it has been installed and left in the camcorder for a long period of time. If this occurs, the battery may not fully operate even if you charge it.
- If the battery is not used for a long time, fully charge the battery and then, using your camcorder, drain the charge completely. Do this once every 3 months to keep the battery functioning properly. To store the battery, remove it from your camcorder and put it in a cool, dry place.

#### • Charge an extra battery before using the camcorder outdoors in cold temperatures.

- The cold temperature may shorten the length of time you can use the battery before needing to recharge it.
- Carry the supplied AC power adaptor to charge the battery while travelling.

#### • Check whether the battery terminal is damaged if the battery falls or is dropped.

- If you install a battery with the damaged terminal into the camcorder, you can damage the camcorder.

#### • Remove the battery and the memory card from the camcorder and disconnect the AC power adaptor after use.

- Store the battery in a stable, cool and dry place.  
(Recommended temperature : 15°C ~ 25°C (59°F ~ 77°F),  
recommended humidity: 40%~ 60%)

- Temperatures that are too high or too low shorten the battery lifetime.
- The battery terminals can become rusty or malfunction if the battery is stored in a smoky or dusty location.

#### • Recycle or dispose of your dead batteries properly.

#### • The battery lifetime is limited.

- Battery capacity decreases over time and through repeated use. If decreased usage time between charges becomes significant, it is probably time to replace the battery with a new one.
- Each battery's life is affected by storage, and operating and environmental conditions.



- Make sure to turn off the camcorder before disconnecting the AC power adaptor. Otherwise, you can damage the storage media or data.
- Use a nearby wall outlet when using the AC power adaptor. Disconnect the AC power adaptor from the wall outlet immediately if any malfunction occurs while using your camcorder.
- Do not place the AC Adaptor in a confined space when you use it, such as between a wall and a piece of furniture.

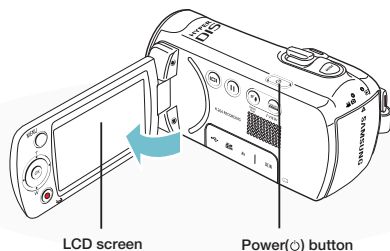



- Be sure to use the included AC power adaptor to power the camcorder. Using other AC power adaptors could cause electric shock or result in fire.
- You can use the AC power adaptor around the world. An AC plug adaptor is required in some foreign countries. If you need one, purchase it from your distributor.
- The charging time will vary depending on the charge remaining in the battery.
- The battery is charged over 95% after about 2 hours, and the indicator color changes to green. It takes about 2 hours and 40 minutes for the battery to charge 100%.

# Basic operation of the camcorder

## TURNING YOUR CAMCORDER ON/OFF

1. Open the LCD screen and press the **Power** (⏻) button to turn on the camcorder.
  - Set the lens cover open/close switch to open (☑).
2. To turn off the camcorder, press the **Power** (⏻) button.



 The camcorder operates the self-diagnosis function when powered on. If a warning message appears, refer to '**warning indicators and messages**' (→pages 103–105) and take corrective action.

### When using this camcorder for the first time

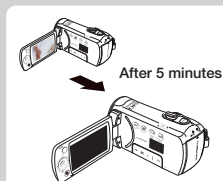
- When you use your camcorder for the first time or reset it, the time zone screen appears at start-up. Select your geographical location, and then set the date and time.  
→page 28  
If you do not set the date and time, the time zone screen appears every time you turn on the camcorder.

## SWITCHING TO THE POWER SAVING MODE

If you need to use camcorder for the extended time, the following functions enable you to prevent unnecessary energy consumption.

### Auto Power Off Function

- To save battery power, you can set the "**Auto Power Off**" function, which turns off the camcorder if there is no operation for 5 minutes.
- To disable this option, change the "Auto Power Off" setting to "Off." →page 89



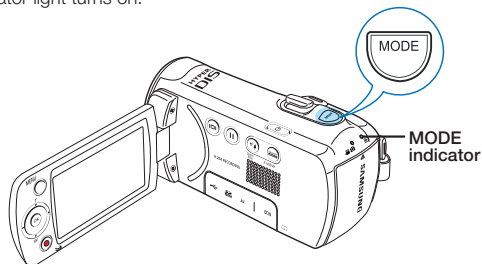
- The power saving mode does not work in the following situations:
  - When the camcorder has a cable connection. (USB or AV)
  - While recording, playing back, or the slideshow is being operated.
- The camcorder consumes less battery power in the power saving mode (about 50% less power than in the standby mode). However, if you plan to use the camcorder for the maximum length of time, we recommend you turn off the camcorder by pressing the Power (⏻) button when not using it.

## SETTING THE OPERATION MODES


You can switch the operating mode in the following order each time you press the **MODE** button.

Record mode (  /  ) → Play mode (  )

- Each time the operation mode changes, the respective mode indicator light turns on.



Mode	Icon	Functions
Record mode	 	To record videos or photos.
Play mode		To play videos or photos, or edit them.

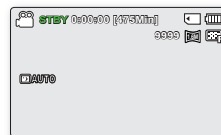
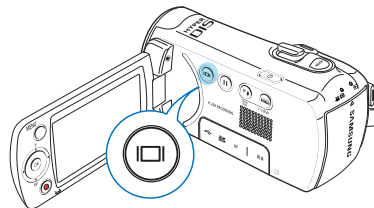
-  This camcorder provides one record mode for both video and photo recordings. You can easily record videos or photos in the same mode without having to switch modes.

## USING THE DISPLAY( ) BUTTON

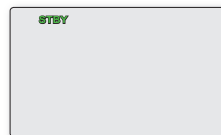
### Switching the information display mode

You can switch the on-screen information display mode. Press the **Display**(  ) button.



- The full and minimum display modes will alternate.



<Full display mode>



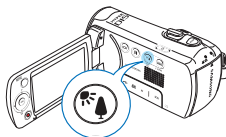
<Minimum display mode>

-  • Warning indicators and messages may appear depending on the recording conditions.
- In the menu screen, the **Display** (  ) button will be deactivated.

### USING THE BACK LIGHT BUTTON

When a subject is lit from behind, this function compensates for lighting so that the subject is not too dark.

Press the **Back Light** (🔦) button to display the (🔦) icon on the screen. To cancel, press the **Back Light** (🔦) button again.



**Back lighting influences recording when the subject is darker than the background:**

- The subject is in front of a window.
- The subject is against a snowy background.
- The subject is outdoors and the background is overcast.
- The light sources are too bright.
- The person to be recorded is wearing white or shiny clothes and is placed against a bright background:  
The person's face is too dark to distinguish his/her features.



<Backlight off>

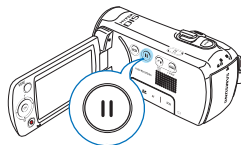


<Backlight on>

### USING THE CONTINUOUS RECORDING FUNCTION

Using the Continuous Recording function when recording video, you can combine desired scenes into one video file, and avoid recording unwanted scenes.

1. Press the **Recording start/stop** button.
  - The recording (●) indicator appears, and recording starts.
2. Press Continuous REC button. The recording pauses and the (||) indicator appears.
  - To continue the recording, press **Continuous REC** button.

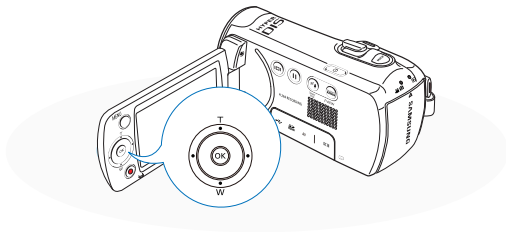


- Your camcorder can record and save files no larger than 1.8GB. If you are using Continuous Record and you resume recording, and the recorded file exceeds 1.8GB, the camcorder will automatically record to a new file.
- If you connect your camcorder to a PC using a USB cable when recording is paused, the camcorder will connect to the PC after it saves the video it has recorded up to the pause.
- If you remove the memory card when the camcorder is in Pause mode, it will stop recording and will not save any of the video it has recorded.

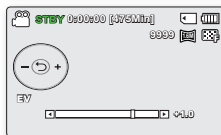
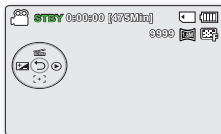
### SHORTCUT MENU (OK guide)

The Shortcut menu (OK guide) displays the most frequently accessed functions for a the selected mode.

An example: Setting EV (Exposure Value) in the Record mode using the Shortcut menu (OK guide).

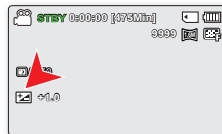


1. Press the OK button in STBY mode.
  - The Shortcut menu (OK guide) is displayed.
2. Press the **Control (Left)** button to select “EV” mode.
  - Press the **Control (Left/Right)** button to adjust the exposure while viewing the image on the LCD screen.



3. Press the OK button to confirm your selection.

- Press the **OK** button to exit the shortcut menu.
- The exposure value setting is applied and the indicator and setting value are displayed.



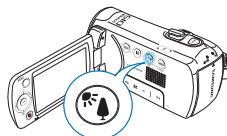
- The Shortcut menu (OK guide) cannot be used in the SMART AUTO mode.
- The example above shows how to set EV in the Record mode using the Shortcut Menu. The setting procedure could be different for other menu items.

### USING THE SMART BGM FUNCTION

You can enjoy the music when it plays video.



- This function works only in Video Play () mode.
- Press the MODE button to select the Play() mode. ➤ page 24
















Select the desired video to play and then press the **Back Light** () button / **Smart BGM** button to display.  
To cancel, press the **Back Light** () button / **Smart BGM** button again.



- You can change the BGM in Smart BGM Option ➤ page 68.

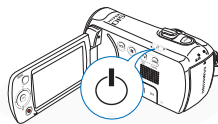


## SHORTCUT FUNCTION USING THE CONTROL BUTTONS

Button	Record (   ) mode	Play (  ) mode		Menu selection
		Video Play (  ) mode	Photo Play (  ) mode	
 OK	 <ul style="list-style-type: none"> <li>- Access the shortcut menu</li> <li>- Confirm selection</li> <li>- Exit the shortcut menu</li> </ul>	 <ul style="list-style-type: none"> <li>- Shortcut menu (OK guide) is displayed</li> <li>- Playback / Pause</li> </ul>	 Single image playback	Confirms selection
 UP	<ul style="list-style-type: none"> <li>- iSCENE</li> <li>- Zoom (tele)</li> </ul>	Increases the volume	Increases the volume (during a slide show)	Moves the cursor up
 DOWN	<ul style="list-style-type: none"> <li>- Focus</li> <li>- Zoom (wide)</li> </ul>	Decreases the volume	Decreases the volume (during a slide show)	Moves the cursor down
 LEFT	EV	<ul style="list-style-type: none"> <li>- Search playback RPS (Reverse Playback Search) rate: x2→x4→x8→x16</li> <li>- Previous Skip Playback</li> <li>- Frame-by-frame playback</li> <li>- Slow motion playback (Reverse slow playback) rate: x1/2→x1/4→x1/8→x1/16</li> </ul>	Previous image	Moves to the previous menu
 RIGHT	Quick View	<ul style="list-style-type: none"> <li>- Search playback FPS (Forward Playback Search) rate: x2→x4→x8→x16</li> <li>- Next Skip Playback</li> <li>- Frame-by-frame playback - Slow motion playback (Forward slow playback) rate: x1/2→x1/4→x1/8→x1/16</li> </ul>	Next image	Moves to the next menu

### SETTING THE TIME ZONE AND DATE/TIME FOR THE FIRST TIME

Set the date and time of your local area when you turn on this camcorder for the first time.



- Open the LCD screen and press the Power (⏻) button to turn on the camcorder.
  - The Time Zone ("Home") screen appears centered on London, Lisbon (Greenwich Mean Time).
  - You can also set the "Time Zone: Home" from the Settings (⚙️) menu. ➡ page 82
- Select your geographical area with **Control (Left/Right)** button, then press the **OK** button.
  - The Date/Time Set screen appears.
- Select the date and time information, and change the setting values by using the **Control (Up/Down/Left/Right)** button.
  - To set the daylight saving, press the **Control (Left/Right)** button to select the (⌚) icon, and then press the **Control (Up/Down)** button to set Daylight Saving on/off.
    - Activating Daylight Saving forwards the time by 1 hour.
- Make sure the clock is correctly set, and then press the **OK** button.



- The year can be set up to 2037.
- Set "Date/Time Display" to "On." ➡ page 84
- After setting, the date and time are automatically recorded on a special data area of the storage media.

#### Built-in rechargeable battery

- Your camcorder includes a built-in rechargeable battery that retains the date and time settings even after the power is turned off.
- Once this battery is depleted, the current date/time values are all reset to defaults, and you need to recharge the built-in rechargeable battery. The date/time must be set again.

#### Charging the built-in rechargeable battery

- The built-in battery is always recharged while your camcorder is connected to the AC power or while the battery is attached. If you do not connect the camcorder to AC power or do not attach the battery for about two months, the built-in battery fully discharges. If this occurs, charge the built-in battery by connecting to the supplied AC adaptor for 24 hours.

#### Turning the date and time display on/off

- To switch the date and time display on or off, access the menu and change the Date/Time Display mode. ➡ page 84

#### Simple setting of the clock by time difference

- You can easily set the clock to the local time by setting a time difference when using your camcorder abroad. Select "Time Zone" on the menu, then set the time difference. ➡ page 82

## SELECTING THE LANGUAGES

You can select the language that appears on the LCD screen. The language setting is retained when the camcorder is powered off.

1. Press the **MENU** button → **Control (Left/Right)** button → “Settings.”
2. Press the **Control (Up/Down)** button to select “Language,” and then press the **OK** button.
3. Press the **Control (Up/Down)** button to select the desired OSD language, and then press the **OK** button.
4. Press the **MENU** button to exit the menu.
  - The OSD language appears in the selected language.



### Submenu items

English	한국어	Français
Deutsch	Italiano	Español
Português	Nederlands	Svenska
Suomi	Norsk	Dansk
Polski	Čeština	Slovensky
Magyar	Română	Български
Ελληνικά	српски	Hrvatski
Українська	Русский	中文
日本語	ไทย	Türkçe
ایرانی	العربية	עברית



- “Language” options may be changed without prior notice.
- The selected language is retained even without the battery or the AC power adaptor.
- The date and time format may change depending on the language you selected.

# About the storage media

## SELECTING THE STORAGE MEDIA (SMX-F53/F54 only)

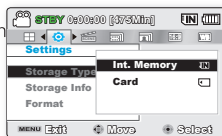
- You can record on the built-in memory or a memory card, so you need to select the desired storage media before starting recording or playback.
- You can use SD and SDHC cards on your camcorder. (Some cards are not compatible depending on the memory card manufacturer and memory card type.)
- Before inserting or ejecting a memory card, turn the camcorder off.

1. Press the **MENU** button → **Control (Left/Right)** button → “**Settings**.”



2. Press the **Control (Up/Down)** button to select “**Storage Type**,” and then press the **OK** button.

3. Press the **Control (Up/Down)** button to select “**Int. Memory**” or “**Card**,” and then press the **OK** button.



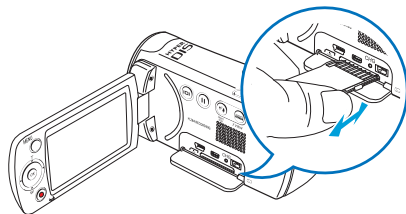
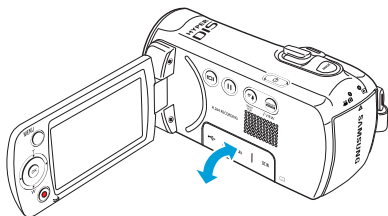
- “**Int. Memory**” : When using the built-in memory.
- “**Card**” : When using a memory card.

4. Press the **MENU** button to exit.



- Never format the built-in memory or memory card using a PC.
- If you insert a memory card when the camcorder is on, the pop-up message will automatically prompt you to select the storage type. (SMX-F53/F54 only)
- If there is no memory card inserted, only the built-in memory will be available. (SMX-F53/F54 only)
- Do not eject a memory card while it is being used in the camcorder. The memory card and its data may be damaged.
- Do not remove the power (battery or AC power adaptor) when using storage media to recording, playback, format, delete, etc. The storage media and its data may be damaged.

### INSERTING AND EJECTING A MEMORY CARD (Not supplied)




#### To insert a memory card

1. Turn the camcorder off.
2. Open the memory card/jack cover as shown in the picture.
3. Insert the memory card into the card slot until it softly clicks.
  - Make sure that the camcorder is placed as shown above and the terminal portion of the card is facing up.
4. Close the cover.

#### To eject a memory card

1. Turn the camcorder off.
2. Open the memory card/jack cover as shown in the picture.
3. Gently push the memory card to eject it.
4. Pull the memory card out of the memory card slot and close the cover.

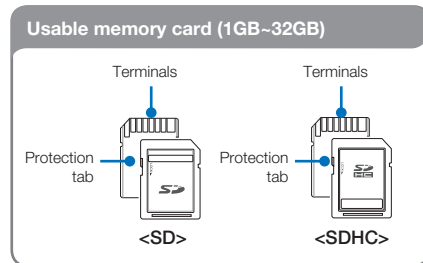
-  • To avoid data loss, turn off the camcorder by pressing the **Power** (⏻) button for one second before inserting or ejecting the memory card.
- Be careful not to push the memory card too hard. The memory card may suddenly pop out.

-  Your camcorder supports only SD (Secure Digital) and SDHC (Secure Digital High Capacity) cards. Compatibility with this camcorder may vary depending on the card manufacturer and type.

### SELECTING A SUITABLE MEMORY CARD (Not supplied)

#### Compatible memory cards

- You can use SD (Secure Digital) and SDHC (Secure Digital High Capacity) cards with this camcorder. We recommend you use an SDHC (Secure Digital High Capacity) card. This camcorder supports SD cards up to 2GB. We cannot guarantee normal operation with SD cards bigger than 2GB.
- MMC (Multi Media Card) and MMC Plus are not supported.
- Compatible memory card capacity:  
SD: 1GB ~ 2GB  
SDHC: 4GB ~ 32GB
- For video recording, use a memory card that supports faster write speeds (above SDHC Class 6 card).
- SD/SDHC memory cards have a mechanical write-protection switch. Setting the switch prevents accidental erasure of files recorded on the card. To enable writing, move the switch up in the direction of the terminals. To set write protection, move the switch down.



#### SDHC (Secure Digital High Capacity) cards

- An SDHC card is a higher version (Ver. 2.00) of the SD card and supports capacities above 2GB.
- SDHC cards cannot be used with current SD enabled host devices.

#### Common cautions for memory cards

- Damaged data may not be recoverable. We recommend you make a back-up of important data separately on the hard disk of your PC.
- Turning the power off or removing a memory card during an operation such as formatting, deleting, recording, and playback may cause data loss.
- If you modify the name of a file or folder stored in the memory card with your PC, your camcorder may not recognize the modified file.

### Handling a memory card

- We recommend that you power off before inserting or removing the memory card to avoid data loss.
- We cannot guarantee that you can use memory cards formatted by other devices. When you format a card, be sure to format the memory card using this camcorder.
- You must format newly-purchased memory cards, memory cards with data that your camcorder cannot recognize, and cards with data saved by other devices. Note that formatting erases all data on the memory card.
- If you cannot use a memory card that has been used with another device, format it with your camcorder. Note that formatting erases all information on the memory card.
- A memory card has a certain life span. If you cannot record new data, you have to purchase a new memory card.
- Do not bend, drop, or subject the card to strong impacts.
- Do not place foreign substances on the memory card terminals. Use a soft, dry cloth to clean the terminals if required.
- Do not paste anything other than the label provided with the card on the label pasting area of the card.
- Do not use a damaged memory card.
- Be careful to keep the memory card out of the reach of children who might swallow it.

The camcorder supports SD and SDHC memory cards, giving you a wider choice of cards to choose from!

The data storage speed of cards may differ, depending on the manufacturer and production system.

- SLC (single level cell) system: faster write speed enabled.
- MLC (multi level cell) system: only lower write speed is supported.

For best results, we recommend using a memory card that supports a faster write speed.

Using a lower write speed memory card for recording video may cause difficulties when storing.

You may even lose your video data during the recording. In an attempt to preserve every bit of the recorded video on a low speed card, the camcorder forcibly stores the video on the memory card and displays a warning:

**“Low speed card. Please record at a lower resolution.”**

If you are unavoidably using a low speed memory card, the resolution and quality of the recording may be lower than the value you set. ➡page 47

The higher the video resolution and quality, the more memory the camcorder uses.



- Samsung is not responsible for data loss due to misuse, including loss caused by any PC virus.
- We recommend using a memory card case to avoid data loss that can be caused by moving the card or by static electricity.
- After a period of use, the memory card may get warm. This is normal and is not a malfunction.

## RECORDABLE TIME AND CAPACITY

### Recordable time available for video

Media Capacity		Built-in memory*		Memory Card					
		8GB	16GB	1GB	2GB	4GB	8GB	16GB	32GB
TV Super Fine (S)	720x480(60i)	190min.	380min.	23min	47min	95min	190min	380min	760min
TV Fine (F)	720x480(60i)	240min.	480min.	30min	60min	120min	240min	480min	960min
TV Normal (N)	720x480(60i)	310min.	620min.	38min	77min	155min	310min	620min	1,240min
Web Fine (F)	640x480(30p)	240min.	480min.	30min	60min	120min	240min	480min	960min
Web Normal (N)	640x480(30p)	310min.	620min.	38min	77min	155min	310min	620min	1,240min

(Unit: Approximate minutes of recording)

### Recordable number of photos

Media Capacity		Built-in memory*		Memory Card					
Mode	Resolution	8GB	16GB	1GB	2GB	4GB	8GB	16GB	32GB
4:3	1600x1200	6,080	9,999	760	1,530	3,040	6,080	9,999	9,999
	800x600	9,999	9,999	1,920	3,840	7,680	9,999	9,999	9,999
16:9	1696x960	6,080	9,999	760	1,530	3,040	6,080	9,999	9,999
	848x480	9,999	9,999	1,920	3,840	7,680	9,999	9,999	9,999

(Unit: Approximate minutes of images)

1GB ≙ 1,000,000,000 bytes : Actual formatted capacity may be less as the internal firmware uses a portion of the memory.



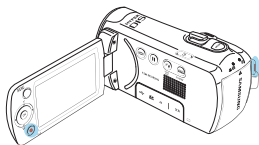
- The figures in the table may differ depending on the actual recording conditions and subject.
- The higher the quality and resolution, the more memory is used.
- Recording at a lower resolution and quality increases the recording time, but the image quality may suffer.
- The bit rate automatically adjusts to the recording image. Accordingly, the recording time may vary.
- Memory cards bigger than 32GB may not operate normally.
- The recording length of a Time Lapse REC may vary depending on settings.
- A memory card that is used to store a video can have un-writable areas, which may result in reduced recording time and free memory space.
- The maximum size of a video (H.264/AVC) file that can be recorded at one time is 1.8GB.
- The camcorder can store up to 9,999 files of videos and photos in one memory card.
- Video (or photo) images recorded by other equipment are not playable on this camcorder.
- Features in the tables above marked with \* are available in the 8GB SMX-F53 and 16GB SMX-F54 models only.
- Recording in the 16:9 aspect ratio will use more memory than the 4:3 aspect ratio. You can select the desired LCD display aspect ratio for recording or playback (16:9 Wide/4:3 aspect ratio). ➡page 48



# Basic recording

Basic procedures to record a video or photo image are described below and on the following pages.

## RECORDING VIDEOS



This camcorder features two Recording start/stop buttons. One is on the rear side of the camcorder, the other is on the LCD screen. Select the one that works best for you.



- ✓ Open the LCD screen and press the **Power** (⏻) button to turn on the camcorder.
- Set the appropriate storage media. ↪ page 30 (SMX-F53/F54 only). (If you want to record on a memory card, insert a memory card.)
- Select the Record (📹/📷) mode by pressing the **MODE** button. ↪ page 24

### 1. Select a subject to record.

- Adjust the LCD panel to the best angle for recording.
- Use the **Zoom** lever or **Zoom** button to adjust the size of the subject. ↪ page 39



### 2. Press the **Recording start/stop** button.

- The recording (●) indicator appears, and recording starts.

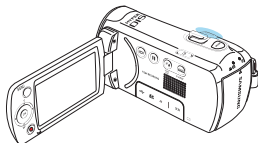
### 3. To stop recording, press the **Recording start/stop** button again.

- ⚠ If power is interrupted or an error occurs during recording, the video may not be recorded/edited.
- Samsung is not responsible for any damage caused by a failure of normal recording or playback operations caused by memory card error.
- Note that damaged data cannot be recovered.
- Do not turn off the camcorder or remove the memory card while accessing the storage media. Doing so may damage the storage media or the data in the storage media.



- For on-screen information display: ↪ pages 12~13
- Eject the battery when you have finished recording to prevent unnecessary battery power consumption.
- For various functions available when you record videos: ↪ page 46
- During recording, some button operations are unavailable. (**MODE** button, **MENU** button, etc.)
- Sound is recorded from the internal stereo microphone on the top-front of the camcorder.  
Take care that this microphone is not blocked.
- Before recording an important video, make sure to test the recording function to check if there is any problem with the audio or video recording.
- Do not operate the Power (⏻) button or remove a memory card while accessing the storage media. Doing so may damage the storage media or the data on the storage media.
- LCD screen brightness and color can be adjusted from the menu. Adjusting the brightness or color of the LCD screen does not affect the image to be recorded. ↪ page 85
- You cannot use a locked memory card for recording. You will see a message saying recording is disabled due to the lock.
- You can switch from the play mode to the record mode by pressing the Recording start/stop or **MODE** button.
- If the power cable/battery is disconnected or recording is disabled during recording, the system is switched to the data recovery mode. While data is being recovered, no other function is enabled. After data recovery, the system will be switched to the STBY mode. When the recording time is short, data recovery might fail.

## RECORDING PHOTOS



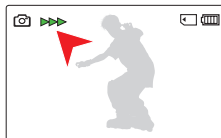
You can take photos and store them on the storage media.  
Set the desired resolution before recording. ➔ page 48

PHOTO



- Open the LCD screen and press the **Power** ( ) button on the camcorder.
- Set the appropriate storage media. ➔ page 30 (SMX-F53/F54 only) (If you want to record on a memory card, insert a memory card.)
- Select the Record ( / ) mode by pressing the **MODE** button. ➔ page 24

1. Select a subject to record.
  - Adjust the LCD panel to the best angle for capturing.
  - Use the **Zoom** lever or **Zoom** button to adjust the size of the subject. ➔ page 39



2. Adjust the subject at the center of the LCD screen.
3. Fully press the **PHOTO** button.
  - The shutter sound is heard (when “**Shutter Sound: On**” is set).
  - To continue capturing, wait until the current photo is completely saved on the storage media.

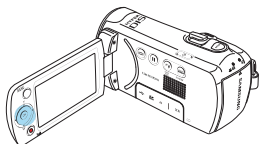


Do not turn off the camcorder or remove the memory card when taking photos as it may damage the storage media or data.



- **This camcorder provides one combined video and photo record mode. You can easily record videos or photos in the same mode without having to change it.**
- The recordable number of photos varies depending on the photo size and quality. ➔ page 34
- Audio is not recorded when you take photos.
- For the on-screen display information, see pages 12~13.
- Photo files conform to the DCF (Design rule for Camera File system) standard, established by JEITA (Japan Electronics and Information Technology Industries Association).
- You can switch from the play mode to the record mode by pressing the **PHOTO** or **MODE** button.
- Using the Quick View function, you can view the most recently recorded video or photo image right after your recording. ➔ page 37

## QUICK VIEW FUNCTION IN THE RECORD MODE



Using the Quick View function, you can view the most recently recorded video or photo image right after you have recorded it.

1. Press the **OK** button in STBY mode right after you've recorded.

- Shortcut menu (OK guide) appears on the LCD screen.



2. Press the **Control (Right)** button to view the most recent video (or photo) you have recorded.

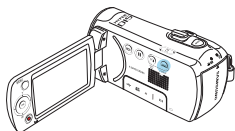
- After the Quick view is finished, your camcorder switches back to the STBY mode.
- During the Quick view, use the **Control (Up/Left/Right/OK)** button for playback search or to delete the current file.



The Quick View function is not available and the Quick View icon is dimmed in the Shortcut menu under the following conditions:

- If you have changed the mode after the recording or the camcorder is connected to a PC with the USB cable.
- If the camcorder has been turned off and on again after the recording.
- In the **SMART AUTO** mode.
- After you have used the Quick View function.

## RECORDING WITH EASE FOR BEGINNERS (SMART AUTO)

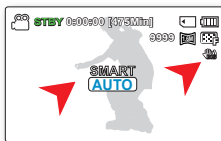


User-friendly SMART AUTO optimizes your camcorder to the recording conditions automatically, providing beginners with the best performance.

- Select the Record ( / ) mode by pressing the **MODE** button.  
 ↳ page 24

1. Press the **SMART AUTO** ( ) button.

- The **SMART AUTO** ( ) and Anti-Shake (HDIS) ( ) icons appear on the screen at the same time.



2. Adjust the subject on the LCD screen.

- The camcorder detects the subject and automatically selects a type of scene and adjusts the settings.
- The icon for the detected scene appears on the LCD screen.

- : Appears when recording a landscape.
- : Appears when recording with a very bright background.
- : Appears when recording a night scene.
- : Appears when recording a portrait outdoors at night.
- : Appears when recording indoors.
- : Appears when recording a portrait.
- : Appears when recording a close-up.

3. Press the **Recording start/stop** button or **PHOTO** button.  
 ↳ pages 35~36

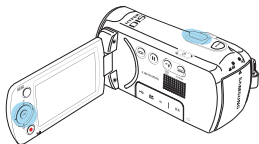
4. To cancel SMART AUTO mode, press the **SMART AUTO** ( ) button again.

- The SMART AUTO ( ) and Anti-Shake (HDIS) ( ) icons disappear from the screen.



- Buttons unavailable during SMART AUTO operation: MENU button / OK button/ etc. Most settings are automatically adjusted in SMART AUTO mode. To set or adjust functions on your own, release the SMART AUTO mode first.
- SMART AUTO must be set before recording.
- When there is no detected scene, the ( ) icon appears.
- The camcorder may not detect the Portrait mode when recording a face, depending on the position of the face or brightness.
- Depending on conditions such as lighting, shaking of the camcorder, or distance to the subject, the camcorder may detect the image you see on the LCD screen as a different scene type each time you apply Smart Auto.

## ZOOMING

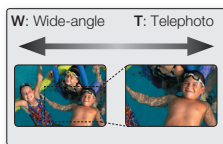


Use the zoom function for close-up or wide-angle recording. This camcorder allows you to record using 52x optical power zoom, 65x Intelli-zoom and 2200x digital zoom.



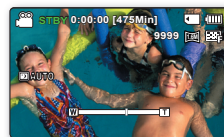
## To zoom in

Slide the Zoom lever towards T (telephoto).  
(Or press the **Control (Up)** button on the LCD panel.)



## To zoom out

Slide the Zoom lever towards W (wide-angle).  
(Or press the **Control (Down)** button on the LCD panel.)



- Zoom magnification over 65x is done through digital image processing, and is therefore called digital zoom. Digital zooming is possible up to 2200x. Set “**Zoom Type**” to “**Digital Zoom.**” ↪ page 62
- To maintain sharp focus, the minimum possible distance between the camcorder and subject is about 1cm (about 0.39 inch) for wide-angle and 1m (about 39.4 inches) for telephoto.
- Optical zoom preserves image quality, but the image quality may suffer when you use digital zoom.
- Fast zooming or zooming in a subject that is a good distance away may cause the camcorder to focus slowly. If this occurs, use “**Manual Focus.**” ↪ page 56
- We recommend you use **Anti-Shake (HDIS)** for handheld recording when the subject is zoomed in and enlarged.
- Frequent use of the zoom function consumes more power.
- If you zoom when recording, the camcorder may record the sound of the zoom lever or zoom button operating.
- When you use the zoom function, you can decrease its speed by slowly moving the Zoom (T/W) lever. Moving the lever quickly increases the zoom speed. However, you cannot use the Zoom (T/W) button on the display to adjust the zoom speed.

# Basic playback

You can view recorded videos and photos in thumbnail index view and play them in various ways. In the thumbnail index view, you can directly select and display a desired image without using fast forwarding and rewinding.

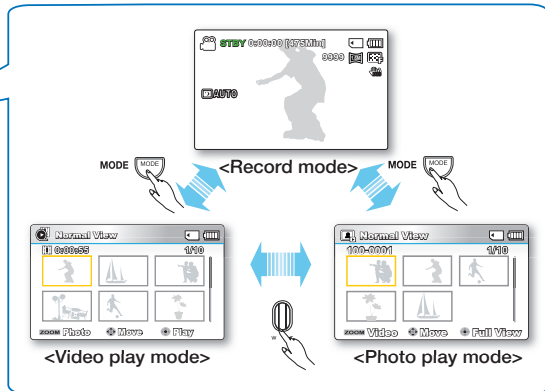
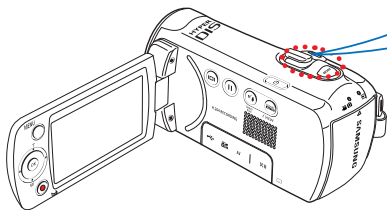
- **This camcorder provides one combined video and photo record mode. You can easily record videos or photos in the same mode without having to change it.**

## CHANGING THE PLAYBACK MODE

- Pressing the **MODE** button changes the operation mode to Record (  /  ) and Play (  ) mode in turn.
- The recorded videos or photos are displayed in thumbnail index view. Depending on the record mode, recordings are stored in videos or photos thumbnail index view, respectively. When switching to Play mode after recording a video, the videos thumbnail index view appears. When switching to Play mode after recording a photo, the photos thumbnail index view appears.

### How to change between video and photo thumbnail view

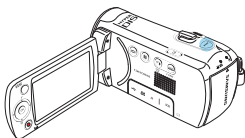
You can easily switch between video and photo thumbnail view using the zoom lever.



Multi View Option lets you sort thumbnails of recorded videos and photos by different display options (recording, recorded date).

➡ page 67

## PLAYING VIDEOS



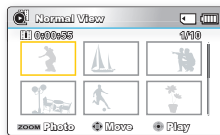
You can preview recorded videos in a thumbnail index view, find your desired video quickly, and playback directly.



- This function works only in Video Play ( ) mode.
- You can find a desired video image quickly using the thumbnail index view.

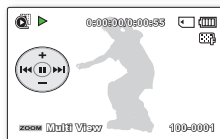
- Open the LCD screen and press the **Power** ( ) button to turn on the camcorder. ➔page 23

- Set the appropriate storage media. (SMX-F53/F54 only) ➔page 30  
(If you want to playback images on a memory card, insert a memory card.)



- Press the **MODE** button to select the Play mode.

- The thumbnail index view appears. The thumbnail highlight is on the latest created or played file.



- Select the Video thumbnail index view screen.

- You can easily switch between video and photo thumbnail view using the zoom lever.
- The playing time of the selected file and the thumbnail showing the video playback will appear on the screen.

- Use the **Control (Up/Down/Left/Right)** button to select the desired videos, and then press the **OK** button.

- If you set the Date/Time Display before video playback, the date/time appears briefly for about a second and then the selected video starts playing.
- The shortcut menu for playback appears for 3 seconds.
- The selected videos are played according to the Play Option setting. ➔page 68
- To stop playback and return to the thumbnail index view, move the zoom lever.



Do not power off the camcorder or eject the memory card during video playback. Doing so may damage the recorded data.

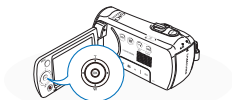


- The loading time of a video may vary depending on the video file's size and video resolution.
- Video files may not play back on the camcorder in the following cases:
  - The video files have been edited or renamed on a PC.
  - The video files have been recorded by devices other than the camcorder.
  - The video files are in formats that are not supported by the camcorder.
- The built-in speaker automatically turns off when the Audio/Video cable is connected to the camcorder. (When the camcorder is connected to an external device, adjust the volume using the connected external device.)
- You can playback recorded video files on a TV or a PC. ➔pages 92, 97
- You can upload recorded videos or photos to YouTube, Flickr, and Facebook using Intelli-studio ➔page 100
- For various functions available during playback, see **"playback options."** ➔pages 66~77
- Use the Quick View function if you want to preview the last recorded video or photos. ➔page 37

## Various playback operations

### Playback (pause) (▶/II)

- Press the OK button during playback.
  - To resume normal playback, press the **OK** button again.



### Search playback (◀/▶)

- During playback, press and hold the **Control (Right)** button for forward search, or to the left for reverse search.
- Pressing the **Control (Left/Right)** button to repeatedly increases the search speed for each direction.
  - RPS (Reverse Playback Search) rate:  $x2 \rightarrow x4 \rightarrow x8 \rightarrow x16$
  - FPS (Forward Playback Search) rate:  $x2 \rightarrow x4 \rightarrow x8 \rightarrow x16$
- To resume normal playback, press the **OK** button.



### Skip playback (I◀◀/▶▶I)

- During playback, press the **Control (Right)** button to locate the start point of the next file. Pressing the **Control (Right)** button repeatedly skips files in the forward direction.
- During playback, press the **Control (Left)** button to locate the start point of the current file. Pressing the **Control (Left)** button repeatedly skips files in the reverse direction.
- Press the **Control (Left)** button within 3 seconds from the start point of the current file to skip back to the previous file.

### Frame-by-frame playback (◀II/II▶)

- In pause mode, use the **Control (Left/Right)** button to play the video forward or backward one frame at a time.
  - To resume normal playback, press the **OK** button.

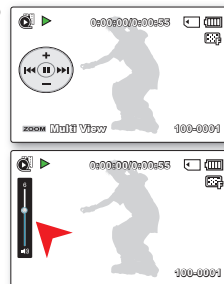
### Slow motion playback (◀I/I▶)

- During pause, holding the **Control (Left/Right)** button reduces the playback speed.
- During slow motion playback, pressing the **Control (Left/Right)** button changes the playback speed.
  - Forward slow playback rate:  $x1/2 \rightarrow x1/4 \rightarrow x1/8 \rightarrow x1/16$
  - Reverse slow playback rate:  $x1/2 \rightarrow x1/4 \rightarrow x1/8 \rightarrow x1/16$
  - To resume normal playback, press the **OK** button.
- The camcorder does not play recorded sound in slow motion playback.

### To adjust the volume

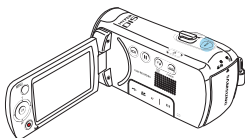
Press the **Control (Up/Down)** button to increase or decrease the volume.

- The volume bar disappears after 3~4 seconds.
- You can hear the recorded sound from the built-in speaker.
- The level can be set anywhere between 0 and 10.  
(If you close the LCD screen while playing, you will not hear the sound from the speaker.)





## VIEWING PHOTOS



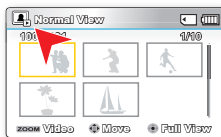
You can view recorded photos by using various playback functions.



- ✓ • This function works only in Photo Play (📷) mode.
- You can find and view desired photos quickly using the thumbnail index view.

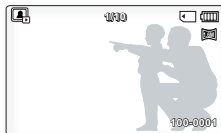
1. Open the LCD screen and press the **Power** (🔴) button to turn on the camcorder. ➡ page 23

- Set the appropriate storage media. (SMX-F53/F54 only) a ➡ page 30  
(If you want to playback images on a memory card, insert a memory card.)



2. Press the **MODE** button to select the Play mode.

- The thumbnail index view appears. The thumbnail highlight is on the latest created or played file.



3. Select the Photo thumbnail index view screen.

- You can easily switch between video and photo thumbnail view using the zoom lever.

4. Use the **Control (Up/Down/Left/Right)** button to select the desired photos, and then press the **OK** button.
  - The shortcut menu for playback appears for a short time.
  - To view the previous/next photo, press the **Control (Left/Right)** button.
  - To return to the thumbnail index view, move the zoom lever.



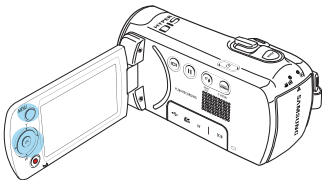
- Do not power off or eject the memory card during photo playback. Doing so may damage the recorded data.
- Your camcorder may not playback the following photo files normally;
  - The photo was recorded on another device.
  - The photo is in a file format not supported by this camcorder (a format that does not conform to DCF standards).



- Loading time may vary depending on the size and quality of the selected photo file.
- Use the Quick View function if you want to preview the last recorded photos. ➡ page 37

# Recording options

## CHANGING THE MENU SETTINGS

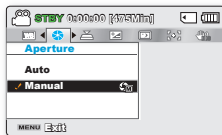
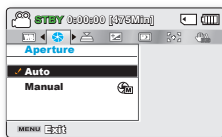


You can change the menu settings to customize **MENU** your camcorder. This chapter uses the "Aperture" function in the Record mode as an example.



### Using the MENU button

1. Open the LCD screen and press the **Power** (⏻) button to turn on the camcorder.
2. **Press the MODE button to select the Record (📹 / 📺) mode.**
3. Press the **MENU** button.
  - The menu screen appears.
4. Press the **Control (Left/Right)** button to select "Aperture."
  - To return to the normal screen, press the **MENU** button.





5. Press the **Control (Up/Down/OK)** button to select the desired submenu item.
  - Depending on the mode selected, some menu items may not be available to select and change.
  - Adjust the value of the selected menu item. For example, adjust the Aperture value by pressing the **Control (Left/Right/OK)** button.
6. When you finish making settings, press the **MENU** button to exit.
  - When you make a menu setting, some menu items may be dimmed and not selectable. For details on the menu items you cannot access at the same time, refer to the Troubleshooting chapter.
    - page 111
  - Starting on the next page are the basic instructions for using menu items. These instructions will help you use each menu item easily. Instructions may differ depending on the menu item you've selected.
  - You can also access the shortcut menu using the **OK** button.
    - pages 26–27

## MENU ITEMS

- Accessible items in the menu vary depending on the operating mode.
- For operation details, see the page listed in the Page column.

## Recording menu items

● : Accessible

Items	Record (  /  ) mode	Default value	Page
iSCENE	●	Auto	46
Video Resolution	●	TV Fine	47
Photo Resolution	●	1696x960 (16:9)	48
16:9 Wide	●	On	48
White Balance	●	Auto	49
Aperture	●	Auto	51
Shutter Speed	●	Auto	52
EV	●	0	54
C.Nite	●	Auto	55
Focus	●	Auto	56
Anti-Shake(HDIS)	●	Off	58
Digital Effect	●	Off	59
Fader	●	Off	60
Wind Cut	●	Off	61
Zoom Type	●	Intelli-Zoom	62
Time Lapse REC	●	Off	63
Guideline	●	Off	65
Settings	●	-	78



Menu options and default values may be changed without prior notice.

## iSCENE

This camcorder automatically sets the shutter speed and aperture according to the subject and brightness for optimum recording. Using iScene, you can also specify one of various modes depending on the subject, recording environment, or purpose of filming.

-  Select the Record ( / ) mode by pressing the **MODE** button.  
 ↳ page 24









1. Press the **MENU** button → **Control (Left/Right)** button → “iSCENE.”


2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.

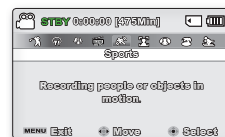


3. Press the **MENU** button to exit the menu.

### Submenu Items

Items (Modes)	Use	On-screen display
<b>Auto</b>	Use this setting for regular recording conditions. The camcorder automatically adjusts the aperture value and shutter speed for optimum recording.	-
<b>Sports</b>	For recording rapidly moving subjects. Example: When recording sports.	
<b>Portrait</b>	For recording a portrait image. Use this setting to capture natural skin tones.	
<b>Spotlight</b>	For recording subjects under strong light. For example, under stage spotlights in theaters.	
<b>Beach</b>	Use where sunlight is intense. Ex: a beach.	
<b>Snow</b>	Use where the reflection of light is intense. Example: a snowfield.	
<b>High Speed</b>	Use to reduce the blurring of objects in rapid motion. Example: an auto race.	
<b>Food</b>	For recording objects close-up in high color saturation.	
<b>Waterfall</b>	For recording a waterfall or fountain.	

-  iSCENE also can be set in the shortcut menu. ↳ page 26~27



## VIDEO RESOLUTION

You can select the resolution of a video to be recorded.

-  Select the Record ( / ) mode by pressing the **MODE** button.  
 ↳ page 24






1. Press the **MENU** button → **Control** (Left/Right) button → “Video Resolution.”



2. Select the desired submenu item with the **Control** (Up/Down) button, and then press the **OK** button.

3. Press the **MENU** button to exit the menu.

### Submenu Items

Items	Use	On-screen display
<b>TV Super Fine</b>	Record videos in 720x480(60i) resolution at super-fine image quality.	
<b>TV Fine</b>	Record videos in 720x480(60i) resolution at fine image quality.	
<b>TV Normal</b>	Record videos in 720x480(60i) resolution at normal image quality.	
<b>Web Fine</b>	Record videos in 640x480 (30p) resolution at fine image quality. Supports viewing at the optimal resolution on a PC.	
<b>Web Normal</b>	Record videos in the 640x480 (30p) resolution at normal image quality. Supports viewing at the optimal resolution on a PC.	

### Suitable Resolution

<b>PC</b>	
<b>Web</b>	"Web Fine" "Web Normal"
<b>Mobile</b>	
<b>Normal TV</b>	"TV Super Fine"
	"TV Fine"
	"TV Normal"



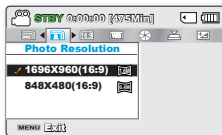
- You can record a scene at five resolution levels: “TV Super Fine,” “TV Fine,” “TV Normal,” “Web Fine” or “Web Normal.” However, the better the resolution is, the more memory the camcorder uses.
- The recording times depend on the resolution of a video to be recorded. ↳ page 34
- The “Web Fine” and “Web Normal” video resolution settings record video in the 4:3 aspect ratio even when you set the aspect ratio to 16:9.

## PHOTO RESOLUTION



You can select the quality of photo images to be recorded.


-  Select the Record (  /  ) mode by pressing the **MODE** button.  
 ↳ page 24

1. Press the **MENU** button → **Control (Left/Right)** button → “**Photo Resolution.**”
2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.
3. Press the **MENU** button to exit the menu.



### Submenu Items

Items	Use	On-screen display
<b>1696x960 (16:9)</b>	Record in 1696x960 resolution.	
<b>848x480 (16:9)</b>	Record in 848x480 resolution.	
<b>1600x1200 (4:3)</b>	Record in 1600x1200 resolution.	<b>2M</b>
<b>800x600 (4:3)</b>	Record in 800x600 resolution.	<b>SVGA</b>

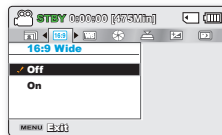
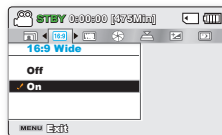
-  • Other devices may not display photos recorded by your camcorder if those devices do not support high resolution.
- For photo development, the higher the resolution, the finer the image quality.
- The number of recordable images varies depending on the recording environment. ↳ page 34
- High resolution images occupy more memory space than low resolution images. If you select a higher resolution for your photos, you will have less space to store photos in the memory.
- The submenu items of Photo Resolution vary depending on whether you select the 16:9 Wide function.

## 16:9 WIDE

You can select the desired LCD display aspect ratio for recording or playback (16:9 Wide/4:3 aspect ratio).


-  Select the Record (  /  ) mode by pressing the **MODE** button.  
 ↳ page 24

1. Press the **MENU** button → **Control (Left/Right)** button → “**16:9 Wide.**”
2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.
3. Press the **MENU** button to exit the menu.



### Submenu items

Items	Use	On-screen display
<b>Off</b>	Disable the function. Display the image in 4:3 aspect ratio. Select to use the standard display aspect ratio of 4:3 on the screen.	-
<b>On</b>	Record and view in 16:9 aspect ratio.	-

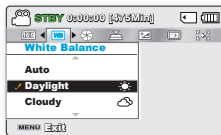
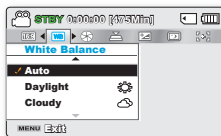
-  • Please set the aspect ratio before recording. The default setting is “**16:9 Wide : On.**”
- The “**Web Fine**” and “**Web Normal**” video resolution settings record video in the 4:3 aspect ratio even when you set the aspect ratio to 16:9.

## WHITE BALANCE






Using the White Balance function, you can select a setting that matches the light illuminating the subject you are shooting (Daylight, Fluorescent, etc.) or let the camcorder make all adjustments automatically. Based on your selection, the camcorder automatically adjusts the color of the subject so the colors in your recording look natural.

-  Select the Record (📹 / 📷) mode by pressing the **MODE** button.  
 ↳ page 24

1. Press the **MENU** button → **Control (Left/Right)** button → “White Balance.”
2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.
3. Press the **MENU** button to exit the menu.



### Submenu items


Items	Use	On-screen display
<b>Auto</b>	To let the camcorder adjust the white balance automatically according to the lighting conditions.	-
<b>Daylight</b>	For recording in clear, outdoor lighting.	
<b>Cloudy</b>	For recording in the shade or cloudy weather.	
<b>Fluorescent</b>	For recording under white fluorescent lights.	
<b>Tungsten</b>	For recording under halogen lamps and incandescent lights.	
<b>Custom WB</b>	Lets you manually adjust the white balance to match the light source or situation.	

### Understanding White Balance:

The White Balance (WB) function removes unrealistic color casts, so that objects which appear white are rendered white in your photo. Proper white balance has to take into account the “color temperature” of a light source, which refers to the relative warmth or coolness of white light produced by the light source.

### To set the white balance manually

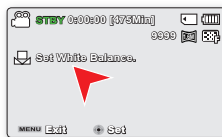
1. Select **"Custom WB."**

- The indicator (  ) and the message **"Set White Balance."** are displayed.




2. Frame a white object such as a piece of paper so that it fills the screen. Use an object that is not transparent.

- If the object that fills the screen is not focused, correct the focus using **"Manual Focus."**  
→ page 56



3. Press the **OK** button.

- The white balance setting will be applied and the indicator (  ) appears.

4. Press the **MENU** button to exit the menu.



- A subject can be recorded under various types of lighting conditions indoors (natural, fluorescent, candlelight, etc.). Because the color temperature is different depending on the light source, the subject's tint will differ, affecting the subject's white balance. Use this function to correct the white balance and provide a more natural result.
- When you set the white balance manually, the object you frame must be white otherwise, your camcorder may not detect an appropriate setting value.
- The adjusted setting remains until you set the white balance again.
- During normal outdoor recording, setting to **"Auto"** may provide better results.
- Cancel the digital zoom function for clear and precise setting.
- Reset the white balance if light conditions change.

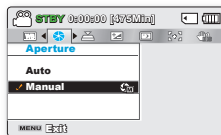
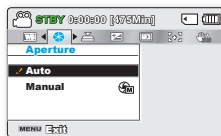


## APERTURE


The camcorder adjusts the aperture automatically depending on the subject and recording conditions. You can also manually adjust the aperture to your preference.

-  Select the Record (📹 / 📷) mode by pressing the **MODE** button.  
 ↳ page 24

1. Press the **MENU** button → **Control (Left/Right)** button → “Aperture”.
2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.
3. Press the **MENU** button to exit the menu.

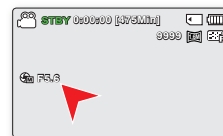
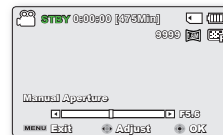


### Submenu Items

Items	Use	On-screen display
<b>Auto</b>	To let the aperture value be set automatically.	-
<b>Manual</b>	To set the aperture value manually.	 FX.X

### Setting the aperture manually:

1. Select "Manual."
2. Adjust the aperture value with the **Control (Left/Right)** button.
  - Confirm your selection by pressing the **OK** button.
  - Exposure value can be set between “F1.8” and “F22.”
  - If you set Aperture to Manual, the higher the aperture, the darker the recorded picture will be.



### Understanding Aperture

The aperture of a photographic lens can be adjusted to control the amount of light reaching the film or image sensor.

The aperture value needs to be adjusted in the following cases:

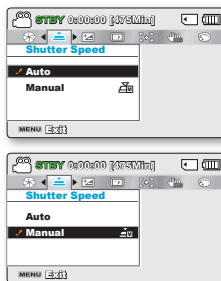
- When you shoot against the light or when the background is too bright.
- When you shoot against a reflective natural background such as at the beach or when skiing.
- When the background is overly dark (for example, night scenes).

## SHUTTER SPEED

The camcorder automatically sets the shutter speed depending on the scene's brightness. You can also manually adjust the shutter speed to your preference.

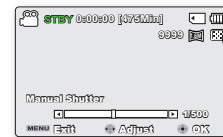
-  Select the Record (  /  ) mode by pressing the **MODE** button.  
 ↳ page 24

1. Press the **MENU** button → **Control (Left/Right)** button → “Shutter Speed.”
2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.
3. Press the **MENU** button to exit the menu.




### Setting the shutter speed manually:

1. Select "Manual."
2. Adjust the shutter speed value with the **Control (Left/Right)** button.
  - Confirm the desired shutter speed setting by pressing the **OK** button.
  - You can set the shutter speed value from 1/60 to 1/10000.
  - To capture fast movements of a subject, set a fast shutter speed value. To give the impression of fast movement overall, set a slow shutter speed value.




### Submenu Items

Items	Use	On-screen display
<b>Auto</b>	To let the camcorder automatically set the appropriate shutter speed value.	-
<b>Manual</b>	Lets you set the shutter speed manually to 1/60, 1/100, 1/250, 1/500, 1/1000, 1/2000, 1/4000, or 1/10000.	 1/XXX

**Recommended shutter speed when recording:**

Shutter Speed	Use For
<b>1/60</b>	Stationary or slow moving subjects. The black bands that usually appear when shooting a TV screen become narrower.
<b>1/100</b>	Indoor sports such as basketball. The flickering that occurs when shooting under a florescent light or mercury-vapour lamp is reduced.
<b>1/250, 1/500, 1/1000</b>	Moving cars, trains, or other rapidly moving vehicles such as roller coasters.
<b>1/2000, 1/4000, 1/10000</b>	Outdoor sports such as golf and tennis.



 Do not aim at the sun. Doing so might cause your camcorder to malfunction. Take images of the sun only in low light conditions, such as at dusk.

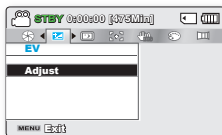
- 
- The image may not seem smooth when you select a high shutter speed.
  - We recommend higher shutter speeds for shooting a fast moving subjects. Note that higher shutter speeds produce a darker image. As the shutter speed increases, the sensor receives less light.

## EV (Exposure Value)

The camcorder usually adjusts the exposure automatically. You can also manually adjust the exposure to your preference.

-  Select the Record ( / ) mode by pressing the **MODE** button.  
→ page 24

1. Press the **MENU** button → **Control (Left/Right)** button → **"EV."**
2. Press the **OK** button.
3. Press the **Control (Left/Right)** button to adjust the exposure while viewing the image on the LCD screen.
  - Exposure value can be set between **"-2.0"** and **"+2.0"**
  - If you set exposure to manual, the higher the exposure, the brighter the recorded picture will be.
4. Confirm your selection by pressing the OK button.
  - Exposure value setting will be applied and the   indicator and setting value appear.
  - To cancel the exposure value manually adjusted, select "0" in Step 3.



## Understanding EV(Exposure Value)

Exposure value is the total amount of light allowed to fall on the photographic medium (Image sensor) during the process of taking photos or videos.

### Manual exposure is recommended in these situations:

- When shooting using reverse lighting or when the background is too bright.
- When shooting against a reflective natural background such as at the beach or when skiing.
- When the background is overly dark or the subject is bright.



- The exposure also can be set in the shortcut menu. → page 26
- The shutter speed also varies automatically depending on the EV value.

## C.Nite




You can adjust the shutter speed when recording a slow moving object, or record a brighter image in dark places without compromising colors.


-  Select the Record ( / ) mode by pressing the **MODE** button.  
 ➔ page 24

1. Press the **MENU** button → **Control (Left/Right)** button → “C.Nite.”
2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.
3. Press the **MENU** button to exit the menu.



### Submenu Items

Items	Use	On-screen display
Off	To disable the function.	-
Auto	To have the camcorder automatically adjusts image brightness.	
1/30	To record a brighter image by extending the low shutter speed range to “1/30.”	
1/15	To record a brighter image by fixing the shutter speed to “1/15” in a dark location.	

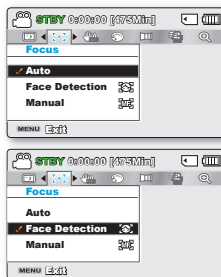
-  When you use C.Nite, the image takes on a slow motion like effect. In addition, the focus adjusts slowly and white dots may appear on the screen. This is not a defect.

## FOCUS



The camcorder usually focuses on a subject automatically (auto focus). When the camcorder is turned on, auto-focus will always be set. You can also manually focus a subject.

-  Select the Record ( / ) mode by pressing the **MODE** button.  
 ↳ page 24

1. Press the **MENU** button → **Control (Left/Right)** button → **"Focus."**
2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.
3. Press the **MENU** button to exit the menu.



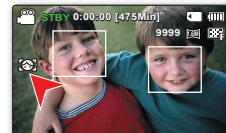
### Submenu Items



Items	Use	On-screen display
<b>Auto</b>	In most situations, it is better to use the automatic focus feature, as it enables you to concentrate on the creative side of your recording.	-
<b>Face Detection</b>	To let the camcorder automatically detect faces and optimize settings and recording conditions.	
<b>Manual</b>	To focus manually. Manual focusing may be necessary under certain conditions that make automatic focusing difficult or unreliable.	

## Face detection

Face Detection detects and recognizes face-like shapes and adjusts focus, color, and exposure automatically. Also, it adjusts recording conditions so that they are optimized for the face detected.

- Press the **Control (Up/Down)** button to select **"Face Detection,"** and then press the **OK** button.
  - Detects a face and frames it in white. The detected face image is optimised automatically.

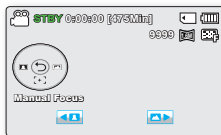



- The Face Detection indicator () and Face Detection frame () are not recorded.
- When Face Detection frames a face, it also adjusts the focus and exposure to optimal values for that face automatically.
- Face Detection may not operate depending on the recording conditions. For example, the Face Detection frame may appear on a 'face-like' shape, even when the subject is not a person's face. If this occurs, turn off the Face Detection feature.
- The Face Detection feature will not work on the side of a person's face or if the illumination is too low. You must be facing subjects "head-on" and have enough illumination.

### Focusing manually during recording:

This camcorder automatically focuses subjects from close-up to infinity. However, the correct focus may not be obtained depending on the recording conditions. In this case, use the manual focus mode.

1. Press the **Control (Up/Down)** button to select “**Manual Focus.**”
  - The manual focus adjustment indicator appears.



2. Press the **Control (Left/Right)** button to select the desired indicator to adjust focus, and then press the **OK** button.
  - The manual focus setting will be applied and the  indicator appears.

### Focusing on a nearer subject

To focus on a nearer subject, press the **Control (Left)** button.





< Nearer subject >



< Further subject >

### Focusing on a further subject

To focus on a further subject, press the **Control (Right)** button.

- The nearer or further icon ( / ) appears between the indicators when focus adjustment reaches the end.
- The adjusted value is applied right after you press the **Control (Left/Right)** button to adjust the focus.

### Manual focus is recommended in the following situations :

- When the subject is dark.
- When the background is too bright.
- When you view the subject through a window that is stained or wet.
- When the subject has dense horizontal or sloping stripes.
- When the subject is distant and behind a nearby wire fence.
- Walls, atmosphere and other low-contrast subject.
- When the subject is emitting or reflecting strong light.
- When you are focusing on a subject near the boundary of the frame.



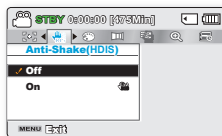
- You can easily adjust the focus using the Shortcut **MENU** button.
  - pages 26~27
- Manual focusing focuses on a point in the framed scene while auto focusing focuses on the center area automatically.
- Use the zoom function to frame the desired target before manually adjusting the focus. If you use the zoom function after manual focusing, refocusing is required.
- Before focusing manually, check if the “**Digital Zoom**” is turned off. When “**Zoom Type**” is set to “**Digital Zoom**,” manual focusing will not focus with accuracy. Turn the “**Digital Zoom**” off. ➤page 62

## ANTI-SHAKE (HDIS)

Use the Anti-Shake (HDIS) function to compensate for unstable images caused by shaking movements when holding the camcorder.

-  Select the Record (📹/📷) mode by pressing the **MODE** button.  
→ page 24

1. Press the **MENU** button → **Control (Left/Right)** button → **"Anti-Shake (HDIS)."**
2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.
3. Press the **MENU** button to exit the menu.




**Use the Anti-Shake function in the following cases:**

- When recording while using the zoom extensively.
- When recording a close up picture of a small object.
- When recording while walking, or moving.
- When recording through a window from inside a vehicle.



- The SMART AUTO mode automatically sets the Anti-Shake (HDIS) to On.
- Gross camcorder shake may not be entirely corrected even if **"Anti-Shake (HDIS): On"** is set. Firmly hold the camcorder with both hands.
- When this function is set to **"On,"** the actual movement of the subject and the movement displayed on the screen may be slightly different.
- Recording in low lighting and at high magnification with this function set to **"On"** may cause after images. If this occurs, we recommend using a tripod (not supplied) and turning the **"Anti-Shake (HDIS)"** to **"Off."**

### Submenu Items

Items	Use	On-screen display
Off	To disable the function.	-
On	To enable the Anti-Shake (HDIS) function to compensate for shaking movements.	

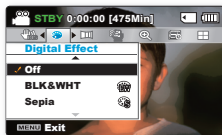


## DIGITAL EFFECT

Using the digital effect function gives your recording a creative look.

-  Select the Record ( / ) mode by pressing the **MODE** button.  
→ page 24

1. Press the **MENU** button → **Control** (Left/Right) button → "Digital Effect."
2. Select the desired submenu item with the **Control** (Up/Down) button, and then press the **OK** button.
3. Press the **MENU** button to exit the menu.



### Examples of 10 digital effect options




**Off**  
Disables the function.




**BLK&WHT** ()  
Changes the image into black and white.



**Sepia** ()  
This mode gives images a reddish brown pigment.




**Negative** ()  
Reverses the colors and the brightness, creating the look of a negative.



**Art** ()  
Adds artistic effects to an image.



**Emboss** ()  
This mode creates a 3D effect (embossing).




**Mosaic** ()  
A mosaic overlay appears on the image.



**Mirror** ()  
This mode cuts the image in half and makes a mirrored image on the other half.



**Pastel** ()  
This mode applies a pale pastel drawing effect to an image.



**Cosmetic** ()  
This mode helps correct facial imperfections.



**Step printing** ()  
Records the image in segments.



The Mosaic, Step printing, Mirror function works only in 4:3 mode.

## FADER

You can give your video recording a professional look by using special effects such as fade in at the beginning of a sequence or fade out at the end of a sequence.

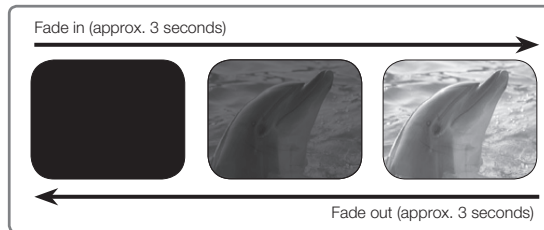
-  Select the Record ( / ) mode by pressing the **MODE** button.  
→ page 24

1. Press the **MENU** button → **Control (Left/Right)** button → “Fader.”






2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.

3. Press the **MENU** button to exit the menu.



- This function is disabled after being used one time.
- The Fader function cannot be applied to video recorded using the Continuous Recording function.

### Submenu Items

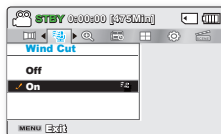
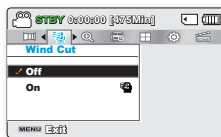
Items	Use	On-screen display
Off	To disable the function.	-
In	To set the recording to fade in when it starts.	
Out	To set the recording to fade out when it stops.	
In-Out	To set the recording to fade in when it starts and fade out when it stops.	

## WIND CUT


Using the Wind Cut function, you can reduce wind noise when recording sound from the built-in microphone.


-  Select the Record ( / ) mode by pressing the **MODE** button.  
→ page 24

1. Press the **MENU** button → **Control (Left/Right)** button → “Wind Cut.”
2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.
3. Press the **MENU** button to exit the menu.



### Submenu Items

Items	Use	On-screen display
Off	To disable the function.	-
On	To reduce wind noise when recording sound from the built-in microphone.	

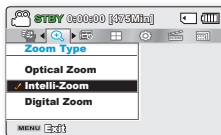
-  Using the Wind Cut function also removes some low-frequency sound with the wind noise.

## ZOOM TYPE

The camcorder offers three types of zoom: optical, intelligent, and digital zoom when recording videos.

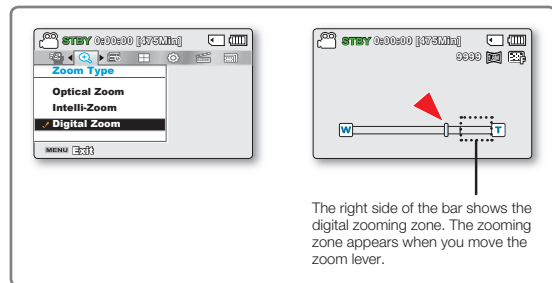
- ☒ Select the Record (📹/📷) mode by pressing the **MODE** button.  
→ page 24

1. Press the **MENU** button → **Control (Left/Right)** button → “Zoom Type.”



2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.

3. Press the **MENU** button to exit the menu.



### Submenu Items

Items	Use	On-screen display
<b>Optical Zoom</b>	To use optical zoom, up to 52x.	-
<b>Intelli-Zoom</b>	<ul style="list-style-type: none"> <li>The camcorder zooms the full width of the image sensor to obtain a larger zoom range without any deterioration in image quality.</li> <li>Intelli-zoom is available up to 65x.</li> </ul>	-
<b>Digital Zoom</b>	<ul style="list-style-type: none"> <li>When this option is selected, the camcorder will switch automatically to the digital zoom if you zoom in beyond the optical or intelligent zoom range.</li> <li>Digital zoom is available up to 2200x.</li> </ul>	-



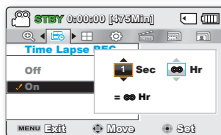
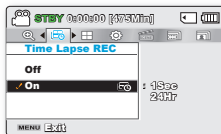
- With the digital zoom, the image is digitally processed more than the intelli or optical zoom modes. As a result, the image resolution may deteriorate.
- The image quality may deteriorate depending on how much you zoom in on the subject.
- Maximum zooming may result in lower image quality.
- The zoom range will change depending on the aspect ratio of the video.

## TIME LAPSE REC

Using the time lapse feature, your camcorder can be programmed to automatically record a number of frames over a period of time, with a certain time interval between each frame. For instance, a camcorder on a tripod (not supplied) in time lapse mode could be set up to shoot frames of a flower opening or a bird building a nest. The results is a time lapse video.


-  Select the Record ( / ) mode by pressing the **MODE** button.  
 ↳ page 24

1. Press the **MENU** button → **Control (Left/Right)** button → “Time Lapse REC.”
2. Press the **Control (Up/Down)** button to select “On,” then press the OK button.
  - The recording interval and total time for recording items are displayed. (“Sec”: seconds, “Hr”: hours)
3. Set a desired recording interval (“Sec”) with the **Control (Up/Down)** button.

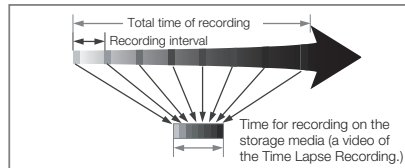


4. Move to the next setting, “Hr,” by pressing the **Control (Left/Right)** button, and then set a desired total recording time in the same way.
5. Press the **OK** button to finish the setting, and then press the **MENU** button to exit the menu.
6. After setting the Time Lapse REC mode, press the **Recording start/stop** button.
  - The Time Lapse REC starts.
  - Depending on the selected total recording time and recording interval, image frames are captured by each scene.

### Submenu items

Items	Use	On-screen display
Off	To disable the function.	-
On	<ul style="list-style-type: none"> <li>Interval (“Sec”): To set the time interval between image captures. Images are automatically shot a frame at a time at the specified interval and stored in the storage media: 1 → 3 → 5 → 10 → 15 → 30 (Seconds)</li> <li>REC Limit (“Hr”): To set the total time from start to finish of recording: 24 → 48 → 72 → ∞ (Hours)</li> </ul>	

### Example of Time Lapse Recording



The Time Lapse Recording function records image frames at a predefined interval over the total recording time to produce a time-lapse video. For example, the Time Lapse Recording is useful for filming in the following situations:

- Blooming flowers
- A bird building a nest
- Clouds rolling by in the sky



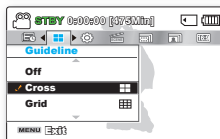
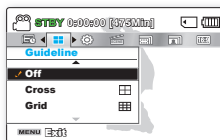
- Time Lapse Recording mode is released once recording has been finished. To start another Time Lapse Recording, repeat steps 1 to 6 on the previous page.
- 25 captured images comprise a video 1 second long. Since the minimum length of a video that your camcorder can save is one second, the interval defines the total minimum recording time for the Time Lapse Recording. For example, if you set the interval to "30 Sec," you need to set the recording time for the Time Lapse Recording to at least 13 minutes to record a minimum video length of 1 second (25 images).
- Press the **Recording start/stop** button if you want to stop the Time Lapse Recording.
- Audio is not recorded during Time Lapse Recording.
- When a video recording fills up 1.8GB of storage memory, a new recording file is automatically started at that point.
- If the battery charge is exhausted during the Time Lapse recording, the camcorder saves recording up to that point and switches to standby mode. After a while, it displays a warning message, then turns off automatically.
- If the storage media becomes full during Time Lapse Recording, the camcorder switches to the standby mode after saving the recording up to the maximum memory available.
- We recommend using the AC power adaptor for a Time Lapse Recording instead of the battery.
- When a time lapse recording starts, the "Time Lapse Recording" message blinks on the screen and it appears as if the screen has stopped. This is normal operation. Do not remove the power source or memory card from the camcorder.

## GUIDELINE




This camcorder provides 3 types of guidelines to help you to set a balanced image composition on the screen.

-  Select the Record (📹 / 📷) mode by pressing the **MODE** button.  
 ↪ page 24

1. Press the **MENU** button → **Control (Left/Right)** button → “Guideline.”
2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.
3. Press the **MENU** button to exit the menu.



### Submenu Items

Items	Use	On-screen display
<b>Off</b>	To cancel the guideline function.	-
<b>Cross</b>	This is the basic guideline. Use this when focusing a subject in the center.	
<b>Grid</b>	Use this when recording a subject in a horizontal or vertical composition, or when shooting with the tele macro function.	
<b>Safety Zone</b>	Positioning subjects within the Safety Zone rectangle ensures they will be recorded.	



- Position a subject at a cross point of a guideline to balance the image composition.
- Guidelines are not recorded.

# Playback options



## MENU ITEMS

- Accessible items in the menu vary depending on the operation mode.
- See pages 40–43 for playback information and button operation.
- See pages 66–77 for details on menu items during playback.

● : Accessible

✕ : Not possible

### Playback menu items

Items		Video Play (  )	Photo Play (  )	Default value	Page
Multi View Option (Thumbnail index view only)		●	●	Normal View	67
Play Option		●	✕	Play All	68
Smart BGM Option		●	✕	BGM 01	68
Delete		●	●	-	69
Protect		●	●	-	70
Story-Board Print		●	✕	-	71
Copy *		●	●	-	73
Edit	Divide	●	✕	-	74
	Combine (Thumbnail index view only)	●	✕	-	75
Slide Show		✕	●	-	76
Slide Show Option		✕	●	-	77
File Info		●	●	-	77
Settings		●	●	-	78



- Menu options and default values may be changed without prior notice.
- Items marked with \* are available only with models SMX-F53/F54.
- In general, functions in both the thumbnail display and full image display employ the same methods, while their detailed options may be different.

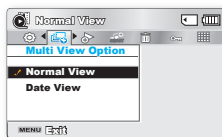


## MULTI VIEW OPTION

The Multi View Option lets you sort thumbnails of recorded videos or photos by different display options.

- ☑ Press the **MODE** button to select the Play (▶) mode.
- ☑ Select the Video or Photo thumbnail index view screen. ➡ page 40

1. Press the **MENU** button → **Control (Left/Right)** button → "Multi View Option."
2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.



<Normal View>



<Date View>

## Submenu Items

items	Uss	On-screen display
<b>Normal View</b>	<ul style="list-style-type: none"> <li>To display the thumbnails of video files sequentially by the length of the files.</li> <li>The thumbnail of the last recorded or played file is highlighted.</li> </ul>	-
<b>Date View</b>	<ul style="list-style-type: none"> <li>To sort the thumbnails of recorded files by the date the files were recorded.</li> </ul>	-

3. You can use the **Control (Up/Down/Left/Right)** button to select a sorted item.

☑ This function is available only in the thumbnail index view screen.

## PLAY OPTION

You can set a specific playback style according to your preference.

- ☒ • Press the **MODE** button to select the Play(▶) mode.
- ☒ • Select the Video thumbnail index view screen. ➡ page 40

1. Press the **MENU** button → **Control (Left/Right)** button → “Play Option.”
2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.
3. Press the **MENU** button to exit the menu.



### Submenu Items

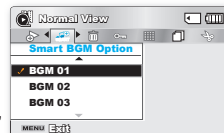
Items	Use	On-screen display
<b>Play All</b>	To play back from the selected video to the last video.	
<b>Play One</b>	To play the selected video only once.	
<b>Repeat All</b>	To play all videos repeatedly.	
<b>Repeat One</b>	To play the selected video repeatedly.	

## SMART BGM OPTION

You can play a video with background music by selecting the desired BGM.

- ☒ • Press the **MODE** button to select the Play(▶) mode.
- ☒ • Select the Video thumbnail index view screen. ➡ page 40

1. Press **MENU** button → **Control (Left/Right)** button → “Smart BGM Option”
2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.



### Submenu Items

Items	Use	On-screen display
<b>BGM 01</b>	To play BGM 01.	-
<b>BGM 02</b>	To play BGM 02	-
<b>BGM 03</b>	To play BGM 03	-
<b>Random</b>	To play BGM 01- 03 randomly.	-

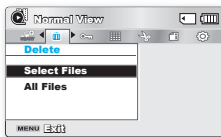
3. Press the **MENU** button to exit the menu.
  - To play a BGM with a video, press the Back Light/Smart BGM button before you start the video. To stop the BGM from playing, press the Back Light/Smart BGM button again.
  - If the original sound in the video is big, the BGM will be decreased naturally. On the other hand, if the original sound in the video is small, the BGM will be increased naturally.
  - While playing the video if you turn on/off the background music, the video start to play from the beginning.
  - When you change BGM by pressing MENU button while the BGM is on, the paused video will go back to from beginning and standby in Pause mode. Press OK button to play it, then new BGM will be executed.

## DELETE

You can erase your recordings one by one, or all at once.

- ✓ Press the **MODE** button to select the Play (▶) mode.
- ✓ Select the Video or Photo thumbnail index view screen. ➡ page 40

1. Press the **MENU** button → **Control (Left/Right)** button → “Delete.”
2. Select an option by pressing the **Control (Up/Down)** button, and then press the **OK** button.



3. If you selected **Select Files**, the selection screen appears. The selected file is deleted.
  - a. Use the **Control (Left/Right)** button to move to the photo or video you want to delete.
  - b. Press the **OK** button to mark the photo for deletion. The garbage can icon appears on the photo or video.
  - c. Repeat Steps a and b for each photo or video you want to delete.
  - d. Press the **Menu** button to delete the the photos and videos you selected.
  - e. The “Delete Selected Files?” screen appears. Use the **Control** button to select **Yes**, and then press the **OK** button.
4. If you selected **All Files**, the “Delete all photo files in card?” screen appears. Use the **Control** button to select **Yes**, and then press the **OK** button.

### Submenu Items

Items	Use	On-screen display
<b>Select Files</b>	To delete individual selected videos or photos. - To delete individual videos or photos, select the desired videos or photos by pressing the <b>OK</b> button, then press the <b>MENU</b> button to delete. - The indicator (🗑️) appears on the selected videos or photos. - Pressing the <b>OK</b> button toggles selection and release.	-
<b>All Files</b>	To delete all videos or photos.	-

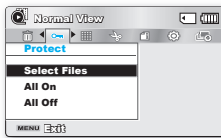
- ⚠️ A deleted file cannot be restored.
- ⚠️ Do not remove the AC power adaptor or memory card while deleting files, otherwise the storage media may be damaged.
- 🔒 To protect important images from accidental deletion, activate image protection. ➡ page 70
- Protected images cannot be deleted. To delete a protected image, cancel the protect function first.
- If the write protection tab on a memory card is set to lock, you cannot delete. ➡ page 32
- You can also format the storage media to delete all the images at once. Be aware that all files and data including protected files will be erased.
- The Delete function does not operate if the battery charge is insufficient. We recommend you use the AC power adaptor to avoid power-loss while deleting.

## PROTECT

You can protect important saved videos or photos from accidental deletion. Protected images will not be deleted unless you release the protection or format the memory.

-  • Press the **MODE** button to select the Play (▶) mode.
- Select the Video or Photo thumbnail index view screen. ➔ page 40

1. Press the **MENU** button → **Control (Left/Right)** button → “Protect.”
2. Select an option by pressing the **Control (Up/Down)** button, and then press the **OK** button.




### Submenu Items

Items	Use	On-screen display
Select Files	To protect selected videos or photos from deletion <ul style="list-style-type: none"> <li>- To protect individual videos or photos, select the desired videos or photos by pressing the <b>OK</b> button, and then press the <b>MENU</b> button to confirm.</li> <li>- The indicator (🔒) is displayed on the selected videos or photos.</li> <li>- Pressing the <b>OK</b> button toggles the video or photo between protected and not protected.</li> </ul>	-
All On	To protect all videos or photos.	-
All Off	To remove protection from all videos and photos.	-

3. If you selected **Select Files**, the selection screen appears
  - a. Use the **Control (Left/Right)** button to move to the photo or video you want to protect.
  - b. Press the **OK** button to mark the photo for protection. The key icon appears on the photo or video.
  - c. Repeat Steps a and b for each photo or video you want to protect.
  - d. Press the **Menu** button to protect the the photos and videos you selected.
  - e. The “Protect Selected Files?” screen appears. Use the **Control** button to select **Yes**, and then press the **OK** button.
4. If you selected All On, the “Protect all on?” screen appears. Use the **Control** button to select **Yes**, and then press the **OK** button.
5. If you selected All Off, the “Protect all off?” screen appears. Use the **Control** button to select **Yes**, and then press the **OK** button.



-  • Protected videos and photos will show the indicator (🔒) when they are displayed.
- If the write protection tab on a memory card is set to lock, you cannot set image protection.

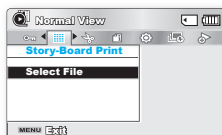
## STORY-BOARD PRINT

This function captures 16 still images randomly from a selected video, and then saves them to the storage media. It presents a quick overview of your video, helping you to understand the overall topic.



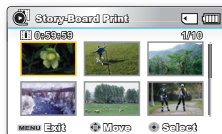
- Press the **MODE** button to select the Play(▶) mode.
- Select the Video thumbnail index view screen. ➡ page 40

1. Press the **MENU** button → **Control (Left/Right/OK)** button → “Story-Board Print” → “Select File.”



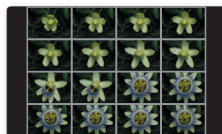
2. Use the **Control (Up/Down/Left/Right)** button to select the desired video, and then press the **OK** button.

- A message appears asking for your confirmation.



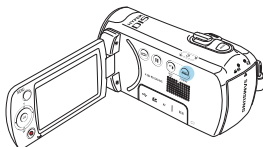
3. Select “Yes.”

- 16 pictures are randomly captured from the selected video and saved to the storage media.
- The printed storyboard image file appears on the LCD screen for about 3 seconds.



- Using the **VIEW** button, you can preview storyboard images to be printed. ➡ page 72
- Storyboard images are displayed in 4:3 aspect ratio. Hence, the camcorder may not display the entire image on its LCD screen. On a computer, it will display the entire image.
- The storyboard printing may not show 16 i-Frame thumbnails in the following case:
  - The recorded video is too short. (To extract 16 i-Frame thumbnails from a video, its recorded time should be longer than 8 seconds.)

## USING iVIEW

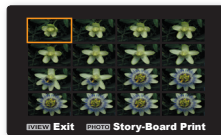
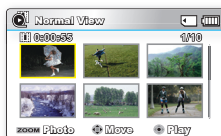


The i-view function lets you preview a 16 image storyboard of a video. The preview gives you a digest of the video you recorded so you can see what's in it without having to watch the entire video.



- ✓ Press the **MODE** button to select the Play(▶) mode.
- Select the Video thumbnail index view screen. ➔ page 40

1. Use the **Control (Up/Down/Left/Right)** button to select the desired video, and then press the **iVIEW** button.
  - 16 images from the selected video are captured randomly.
  - 16 i-Frame images appear on the LCD screen.
  - If you want to save the storyboard image on the storage media, press the **PHOTO** button. You can then find the saved storyboard image in the photo play mode. ➔ page 43



- ✎ If the recorded video is less than 8 seconds long, all 16 i-Frame thumbnails will not be extracted.
- This function is available only in the video thumbnail index view screen.

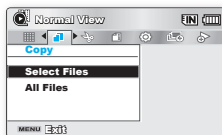
## COPY (SMX-F53/F54 only)

Movies and photos stored in the built-in memory can be copied to the external flash memory card.

Copying to the memory card does not delete originals in the built-in memory.

- ✓ Press the **MODE** button to select the Play(▶) mode.
- Select the Video or Photo thumbnail index view screen. ➡page 40

1. Press the **MENU** button → **Control (Left/Right)** button → “Copy.”
2. Select an option by pressing the **Control (Up/Down)** button, and then press the **OK** button.



3. If you selected **Select Files**, the selection screen appears.
  - a. Use the **Control (Left/Right)** button to move to the photo or video you want to copy.
  - b. Press the **OK** button to mark the photo for copying. The copy icon appears on the photo or video.
  - c. Repeat Steps a and b for each photo or video you want to copy.
  - d. Press the **Menu** button to copy the photos and videos you selected.
  - e. The “Copy Selected Files?” screen appears. Use the **Control (Left/Right)** button to select Yes, and then press the **OK** button.
4. If you selected All Files, the “Copy all files to internal memory?” screen appears. Use the **Control (Left/Right)** button to select **Yes**, and then press the **OK** button.

### Submenu Items

Items	Use	On-screen display
<b>Select Files</b>	To copy individual videos or photos. <ul style="list-style-type: none"> <li>- To copy individual videos or photos, select the desired videos or photos by pressing the <b>OK</b> button.</li> <li>- The indicator (▶) is displayed on the selected videos or photos. Then, press the <b>MENU</b> button to confirm.</li> <li>- Pressing the OK button toggles between applying and removing the copy indicator.</li> </ul>	-
<b>All Files</b>	To copy all the videos or photos.	-



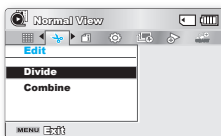
- You cannot copy a file if the memory card has insufficient free space. Remove unnecessary files before proceeding. ➡page 69
- You can copy only as many files as will fit in the free space of the memory card. If the size of the files that you want to copy is larger than the free space, you will see an error message
- If a memory card is not inserted, you cannot perform the “Copy” function.
- Copied videos or photos have no protection even if the original is set to be protected.
- Copying may take a while depending on the number of files and file sizes.
- Copying may not work if the battery charge is insufficient. If available, use the AC adaptor while copying to prevent power disruption.
- Note that removing the battery or disconnecting the AC power adaptor while you copy files may damage the storage media.

## EDIT (Divide)

You can divide a video clip as many times as you want in order to delete a section you no longer need or create sections to combine. Each time you apply Divide, the video is divided into two parts.

- ✓ Press the **MODE** button to select the Play (▶) mode.
- ✓ Select the Video thumbnail index view screen. ➡ page 40

1. Press the **MENU** button → **Control (Left/Right)** button → **"Edit"** → **Control (Up/Down/OK)** button → **"Divide."**

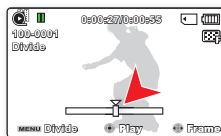


2. Select a desired video clip using the **Control (Up/Down/Left/Right/OK)** button.

- The selected video clip will be paused.



3. Search the point of division by pressing the **Control (Left/Right/OK)** button.



4. Press the **MENU** button to pause at the point of division.
  - A message appears asking for your confirmation.
5. Select **"Yes."**
  - If you want to delete an unwanted section of a video clip, divide the video first, and then delete the section you no longer need. After dividing the video clip, you can also combine the sections with other desired videos. ➡ page 75
  - The second image of the divided image will be displayed at the end of the thumbnail index.

**Example:** You can divide a video clip into two in order to delete a section you no longer need.



- One video clip is divided into two video clips.



- **The Divide function is not available under the following conditions:**
  - If the total recorded time of the video is less than 6 seconds.
  - If you try to divide sections without leaving 3 seconds at the beginning and the end.
  - If the storage media has less than approximately 40MB of free memory space.
  - If the videos were recorded or edited by other devices.
- You cannot divide a protected image. You must first release the protect function to delete it. ➡ page 70
- The division point may drift before or after the designated point by approximately 0.5 seconds.

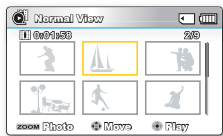
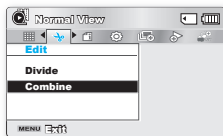


## EDIT (Combine)

You can combine two different video clips.

- ✓ Press the **MODE** button to select the Play (▶) mode.
- Select the Video thumbnail index view screen. ➡ page 40

1. Press the **MENU** button → **Control (Left/Right)** button → “**Edit**” → **Control (Up/Down/OK)** button → “**Combine**.”
2. Use the **Control (Up/Down/Left/Right/OK)** button to move to the first clip you want to combine. This is the clip you want to appear first in the combined clip.
3. Press the **OK** button.  
The (V) indicator and the number 1 appears on the first clip.
  - Pressing the **OK** button toggles the Combine indicator and the number on and off.
4. Use the **Control (Up/Down/Left/Right)** button to move to the second clip you want to combine. This is the clip you want to appear second in the combined clip.
5. Press the **OK** button.  
The (V) indicator and the number 2 appears on the second clip
6. Press the **MENU** button.
  - A message appears asking for your confirmation.



## 7. Select **Yes**.

- The two video clips are combined in the selected order and restored as one video clip.
- The first video clip will appear as the first part of the thumbnail of the combined clip.



- The combine function is not available under the following conditions:
  - If the videos are in different resolution formats. TV Super Fine/TV Fine/TV Normal cannot be combined with Web Fine/Web Normal.
  - If the videos are in different aspect ratios. 4:3 and 16:9 cannot be combined.
  - If one video file is a Time Lapse REC file and the other is a normal file.
  - If the total size of the two files to be combined exceeds approx. 1.8GB
  - If the storage media has less than approximately 40MB of free memory space.
  - If the videos have been recorded or edited by other devices.
- You cannot combine protected images. You must first release the protect function to paste it. ➡ page 70
- The original video clips will not be preserved.
- A maximum of 2 video clips can be combined at a time.
- This function is available only in the thumbnail index view screen.
- If you combine videos having the same resolution but different qualities, the combined video will have the lower image quality for playback. (For example, if you combine a video clip of “TV Super Fine” with another video clip of “TV Fine,” which has the same resolution, then the combined video will be in “TV Fine” resolution and quality.)

## SLIDE SHOW

You can play back all the photos stored in the storage media automatically.

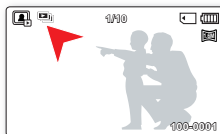
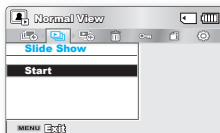


- Press the **MODE** button to select the Play (▶) mode.
- Select the Photo thumbnail index view screen. ➡ page 40

1. Press the **MENU** button → **Control (Left/Right)** button → “Slide Show” → “Start.”

2. Press the **OK** button.

- The (▶) indicator is displayed.  
The Slide Show will start from the current image.
- To end the slide show, press the **OK** button again.
- To return to the thumbnail view, move the **Zoom** lever.



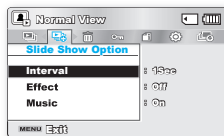
- 4 background music files are stored in the camcorder by default. When a slide show begins, the camcorder plays background music in a random order.
- You can adjust the background music's volume level using the **Control (Up/Down)** button.

## SLIDE SHOW OPTION

You can enjoy a slide show with various effects.

- ☒ Press the **MODE** button to select the Play (▶) mode.
- ☒ Select the Photo thumbnail index view screen. ↗page 40

1. Press the **MENU** button → **Control (Left/Right)** button → “Slide Show Option.”



2. Select an option by pressing the **Control (Up/Down/Left/Right)** button, and then press the **OK** button.
3. Press the **MENU** button to exit the menu.

### Submenu Items

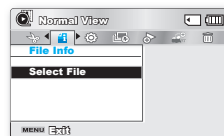
Items	Use	On-screen display
Interval	To set the slideshow's image transition interval. (1 sec or 3 sec)	-
Effect	If “Effect” is set to “On”, the slideshow displays images consecutively.	-
Music	If “Music” is set to “On”, the slideshow will play back with background music. (The background music is selected randomly from 4 sample stored music files.)	-

## FILE INFO

The camcorder shows you information about the recorded images.

- ☒ Press the **MODE** button to select the Play (▶) mode. ↗page 24

1. Press the **MENU** button → **Control (Left/Right/OK)** button → “File Info” → “Select File.”



- The file selection screen appears.

2. Select a desired video clip using the **Control (Up/Down/Left/Right/OK)** button, and then press the **OK** key..

- The following information for the selected file is displayed:
  - Date
  - Duration (Video only)
  - Size
  - Resolution



3. Press the **MENU** button to exit the menu.

# System setting

## MENU ITEMS

You can setup the date/time, OSD language, and display settings of the camcorder.

● : Accessible

✕ : Not Accessible

### Setting menu items

Items	Record (H/PS/AV) mode	Play mode (Thumbnail index screen)		Play mode (Full image display mode)		Default values	Page
		Video	Photo	Video	Photo		
<b>Storage Type *</b>	●	●	●	✕	✕	Int. Memory	79
Storage Info	●	●	●	●	●	-	79
Format	●	●	●	●	●	-	80
File No.	●	●	●	●	●	Series	81
Time Zone	●	●	●	●	●	Home	82
Date/Time Set	●	●	●	●	●	-	83
Date Type	●	●	●	●	●	-	83
Time Type	●	●	●	●	●	12Hr	84
Date/Time Display	●	●	●	●	●	Off	84
LCD Brightness	●	✕	✕	✕	✕	0	85
LCD Color	●	✕	✕	✕	✕	0	85
LCD Enhancer	●	●	●	●	●	Off	86
Auto LCD Off **	●	●	●	●	●	On	86
Menu Design	●	●	●	●	●	Misty White	87
Transparency	●	✕	✕	✕	✕	0%	87
Beep Sound	●	●	●	✕	●	On	88
Shutter Sound	●	●	●	●	●	On	88
Auto Power Off **	●	●	●	●	●	5 Min	89
PC Software	●	●	●	●	●	On	89
TV Display	●	✕	✕	●	●	On	90
Default Set	●	●	●	✕	✕	-	90
Version	●	●	●	●	●	-	90
Language	●	●	●	●	●	English	90
Demo	●	✕	✕	✕	✕	On	91

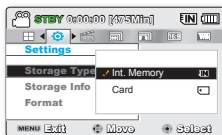
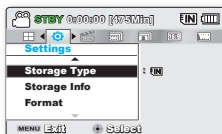


- Menu options and default values may be changed without prior notice.
- There are some functions you cannot activate simultaneously in the menu. These items are grayed out. You cannot select the gray menu items.
- Items marked with \* are available only with models SMX-F53/F54.
- Items marked with \*\* are available only when the camcorder is powered by the battery.

## STORAGE TYPE (SMX-F53/F54 only)

You can record videos or photos on the built-in memory or a memory card, so you should select the desired storage media before starting recording or playback.

1. Press the **MENU** button → **Control (Left/Right)** button → “Settings” → **Control (Up/Down/OK)** button → “Storage Type.”
2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.
3. Press the **MENU** button to exit the menu.



### Submenu Items

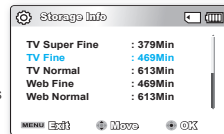
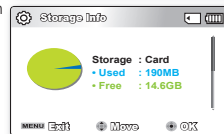
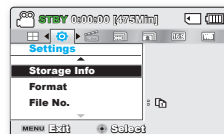
Items	Use	On-screen display
Int. Memory	To select the built-in memory as the storage medium. You can record to or play back images from the built-in memory.	
Card	To select a memory card as storage medium. You can record to or play back images from a memory card.	

If there is no storage media inserted, it cannot be selected and will be dimmed in the menu.

## STORAGE INFO

Storage Info shows you the storage information for the storage media. You can view the storage media, used memory space, and available memory space.

1. Press the **MENU** button → **Control (Left/Right)** button → “Settings” → **Control (Up/Down/OK)** button → “Storage Info.”
2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.
  - Press the **Control (Up/Down)** button to select the desired storage type, then press the **OK** button. (SMX-F53/F54 only)
3. Information on the selected storage type appears.
  - The screen displays the memory capacity of the selected storage and recordable time by video resolution.
  - Press the **Control (Up/Down)** button to scroll the screen and see additional information.
  - After checking the information, press the **OK** button to return to the previous menu screen.
4. Press the **MENU** button to exit the menu.



### Submenu Items


Items	Use	On-screen display
Int. Memory (SMX-F53/F54 only)	To show the memory information of the built-in memory.	-
Card	To show the memory information of the inserted memory card.	-

If there is no storage media inserted, it cannot be selected and will be dimmed on the menu.

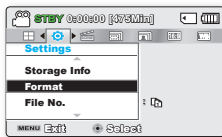
In the Storage Info display, you can check the used and available memory as well as the remaining recording time for each recording resolution. For the desired information, scroll the screen using the **Control (Up/Down)** button.

## FORMAT

Use Format if you want to delete all files completely or to correct problems on the storage media.

-  After formatting, the speed of the storage media becomes more stable. However, ensure that formatting can delete all files on the storage media including protected files and all settings can be restored.

1. Press the **MENU** button → **Control (Left/Right)** button → **"Settings"** → **Control (Up/Down/OK)** button → **"Format."**
2. Select the desired storage media with the **Control (Up/Down)** button, and then press the **OK** button. (SMX-F53/F54 only)
3. A message appears asking for your confirmation.
  - Select "Yes" using the **Control (Left/Right/OK)** button.
4. Press the **MENU** button to exit the menu.



- Do not remove the recording medium or perform any other operation (such as turning off the power) during formatting. Also, be sure to use the provided AC adapter, as the recording medium may be corrupted if the battery becomes exhausted during formatting.
- If the recording medium becomes corrupted, format it again.



- **Do not format the storage media on a PC or other device.** Make sure to format the storage media on this camcorder.
- Format the memory card in the following cases:
  - Before using a new memory card
  - If the memory card was formatted on other devices
  - If the memory card was used to record on other devices
  - If the camcorder cannot read the memory card
- A memory card with the protection tab set to lock will not be formatted.
- If there is no storage media inserted, it cannot be selected and will be dimmed in the menu.
- You cannot format when the battery power is insufficient. We recommend you use the AC power adaptor to avoid loss of power while formatting.

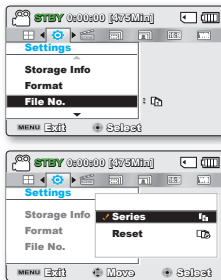
### Submenu Items

Items	Use	On-screen display
Int. Memory (SMX-F53/F54 only)	To format the built-in memory.	-
"Card"	To format a memory card.	-

## FILE NO.

File numbers are assigned to recorded files in the order they were recorded.

1. Press the **MENU** button → **Control (Left/Right)** button → **"Settings"** → **Control (Up/Down/OK)** button → **"File No."**
2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.
3. Press the **MENU** button to exit the menu.



### Submenu Items

items	contents	on-screen display
Series	Assigns file numbers in sequence even if you have inserted a different memory card, formatted the card, or deleted all files. The file number is reset only when a new folder is created.	-
Reset	Resets the file number to 0001.	-

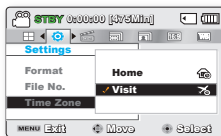
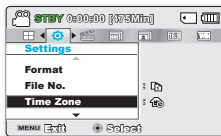


When you set "File No." to "Series", each file is assigned a different number to avoid duplicating file names. It is convenient when you want to manage your files on a computer.

## TIME ZONE

You can easily set the clock to the local time when using your camcorder while travelling.

1. Press the **MENU** button → **Control (Left/Right)** button → **"Settings"** → **Control (Up/Down/OK)** button → **"Time Zone."**
2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.
3. Press the **MENU** button to exit the menu.



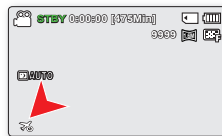
### Submenu Items

Items	Use	On-screen display
Home	To have the clock display your home time, that is, the time you set on the "Date/Time Set" menu. Select Home when using this camcorder for the first time or when returning the clock to your hometown date/time setting.	-
Visit	When you visit a different time zone, to set the clock to the local time without changing your hometown time setting. The clock will be adjusted in accordance with the time difference between the two locations.	

## Setting the clock to the local time ("Visit")

You can easily set the clock to the local time zone when travelling.

1. Press the **Control (Up/Down)** button to select the **"Time Zone"** in Settings mode, and then press the **OK** button.
  - The Time Zone screen will be displayed.
2. Select **"Visit"** with the **Control (Up/Down/OK)** button, and then select the area you are visiting using the **Control (Left/Right)** button.
  - You can check the time difference between **"Home"** and **"Visit."**
3. Press the **OK** button to confirm.
  - The clock is set to the time zone of the place you are visiting.



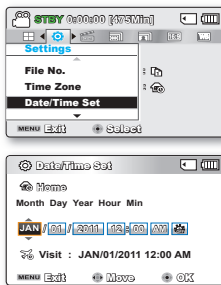
You can set the date and time in **"Date/Time Set"** from the **"Settings"** menu. ➞ page 83



## DATE/TIME SET

By setting the date and time, you can display the date and time of a recording during playback.

1. Press the **MENU** button → **Control (Left/Right)** button → **"Settings"** → **Control (Up/Down/OK)** button → **"Date/Time Set."**
2. Select the date and time information, and change the setting values by using the **Control (Up/Down/Left/Right)** button.
3. Make sure the clock is correctly set, and then press the **OK** button.

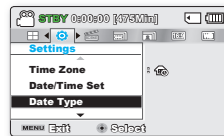


- The year can be set up to 2037.
- Set **"Date/Time Display"** to on. ➡ page 84
- Activating the  icon forwards the time by 1 hour.

## DATE TYPE

You can set the display type format for the date.

1. Press the **MENU** button → **Control (Left/Right)** button → **"Settings"** → **Control (Up/Down/OK)** button → **"Date/Type."**
2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.
3. Press the **MENU** button to exit the menu.



### Submenu Items

Items	Use	On-screen display
2011/01/01	To display the date in the year/month (two-digit)/day format.	2011/01/01
JAN/01/2011	To display the date in the month/date/year format.	JAN/01/2011
01/JAN/2011	To display the date in the date/month/year format.	01/JAN/2011
01/01/2011	To display the date in the date/month (two-digit)/year format.	01/01/2011

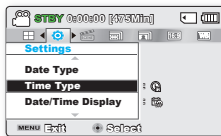


This function depends on the **"Date/Time Display"** setting.

## TIME TYPE

You can set the display type format for the time.

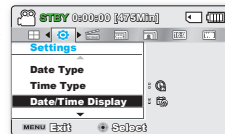
1. Press the **MENU** button → **Control** (Left/Right) button → “**Settings**” → **Control** (Up/Down/OK) button → “**Time Type**.”
2. Select the desired submenu item with the **Control** (Up/Down) button, and then press the **OK** button.
3. Press the **MENU** button to exit the menu.



## DATE/TIME DISPLAY

You can have the date and/or time displayed on the LCD screen.

1. Press the **MENU** button → **Control** (Left/Right) button → “**Settings**” → **Control** (Up/Down/OK) button → “**Date/Time Display**.”
2. Select the desired submenu and menu item with the **Control** (Up/Down) button, and then press **OK** button.
  - The date/time is displayed on the LCD screen according to the selected option.



### Submenu Items

Items	Use	On-screen display
<b>12Hr</b>	To display the time information in 12 hour units	12:00 AM
<b>24Hr</b>	To display the time information in 24 hour units	00:00

### Submenu Items

Items	Use	On-screen display
<b>Off</b>	To not display the current date/time.	-
<b>Date</b>	To display the current date.	JAN/01/2011
<b>Time</b>	To display the current time.	12:00 AM
<b>Date &amp; Time</b>	To display the current date and time.	JAN/01/2011 12:00 AM



This function depends on the “**Date/Time Display**” setting.



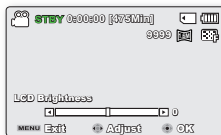
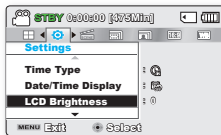
The date/time will read “**JAN/01/2011 12:00 AM**” in the following cases:

- When the video or photo recording was made before you set the date/time in the camcorder.
- When the built-in rechargeable battery is depleted.

## LCD BRIGHTNESS

You can adjust the brightness of the LCD screen to compensate for ambient lighting conditions.

1. Press the **MENU** button → **Control (Left/Right)** button → “Settings” → **Control (Up/Down/OK)** button → “LCD Brightness.”
2. Press the **Control (Left/Right/OK)** button to adjust the LCD brightness from -15 to 15.
3. Press the **MENU** button to exit the menu.

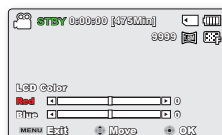
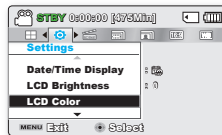


- If the surrounding is too bright, adjust the brightness of the LCD screen.
- Adjusting the LCD screen does not affect the image being recorded.
- A brighter LCD screen consumes more power.
- You can adjust the LCD Brightness from -15 to 15.

## LCD COLOR

You can change the color of the LCD screen by adjusting the red and blue color range.

1. Press the **MENU** button → **Control (Left/Right)** button → “Settings” → **Control (Up/Down/OK)** button → “LCD Color.”
2. Press the **Control (Up/Down/Left/Right/OK)** button to adjust the LCD color (red/blue) from -15 to 15.
3. Press the **MENU** button to exit the menu.

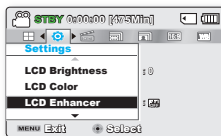


- When you set the red and blue color range, the higher the numbers, the brighter the LCD screen will be.
- You can adjust the LCD color (red/blue) from -15 to 15, using the **Control (Up/Down/Left/Right/OK)** button.
- You can manipulate the color displayed on the LCD screen by adjusting the color ratio of red and blue.
- Adjusting the color display of the LCD screen does not affect the image to be recorded.

## LCD ENHANCER

You can enhance the contrast on the LCD screen for a clearer and brighter image. This effect also works outdoors in bright daylight. You can also adjust the screen brightness in two-level increments, which provides a brighter screen than using just a one-level increment.

1. Press the **MENU** button → **Control (Left/Right)** button → “Settings” → **Control (Up/Down/OK)** button → “LCD Enhancer”
2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.



### Submenu Items

Items	Use	On-screen display
Off	To disable the function.	-
1	To turn on the 1st level of the LCD Enhancer.	
2	To turn on the 2nd, brighter level of the LCD Enhancer.	

3. Press the **MENU** button to exit the menu.

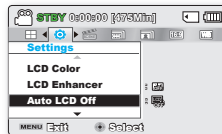


- LCD enhancer function does not affect the quality of the image being recorded.
- When you use the LCD Enhancer in low illumination, some stripes may appear on the LCD screen. This is not a malfunction.
- Using the LCD Enhancer function may cause colors to look different on the display.

## AUTO LCD OFF

To reduce power consumption, the brightness of the LCD screen is automatically dimmed if the camcorder is idle for more than 2 minutes.

1. Press the **MENU** button → **Control (Left/Right)** button → “Settings” → **Control (Up/Down/OK)** button → “Auto LCD Off.”
2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.



### Submenu Items

Items	Use	On-screen display
Off	To disable the function.	-
On	When the camcorder is idle for more than 2 minutes in Video or Photo STBY mode, or for more than 5 minutes when recording a video, the power saving mode starts by dimming the LCD screen.	-

3. Press the **MENU** button to exit the menu.

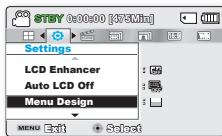


- When the “Auto LCD Off” function is enabled, you can press any button on the camcorder to return LCD brightness to normal.
- Auto LCD Off will be disabled in the following case:
  - If the DC power cable (AC power adaptor, USB cable) is connected.

## MENU DESIGN

You can select the desired menu design.

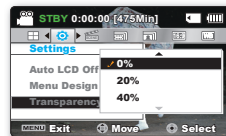
1. Press the **MENU** button → **Control (Left/Right)** button → **"Settings"** → **Control (Up/Down/ok)** button → **"Menu Design."**
2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.
  - **"Misty White"** → **"Premium Black."**
3. Press the **MENU** button to exit the menu.



## TRANSPARENCY

You can select the desired menu display transparency.

1. Press the **MENU** button → **Control (Left/Right)** button → **"Settings"** → **Control (Up/Down/OK)** button → **"Transparency."**
2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.
  - **"0%"** → **"20%"** → **"40%"** → **"60%"**
3. Press the **MENU** button to exit the menu.



<Transparency 0%>



<Transparency 60%>

## BEEP SOUND

When Beep Sound is on, the camcorder sounds a beep when you press a button.

1. Press the **MENU** button → **Control (Left/Right)** button → “Settings” → **Control (Up/Down/OK)** button → “Beep Sound.”
2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.
3. Press the **MENU** button to exit the menu.



## SHUTTER SOUND

You can turn the shutter sound the camcorder emits when you press the **PHOTO** button on or off.

1. Press the **MENU** button → **Control (Left/Right)** button → “Settings” → **Control (Up/Down/OK)** button → “Shutter Sound.”
2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.
3. Press the **MENU** button to exit the menu.



### Submenu Items

Items	Use	On-screen display
Off	Disables the function.	-
On	To have the camcorder beep every time you press a button.	-

### Submenu Items

items	contents	on-screen display
Off	To turn the shutter sound off.	-
On	To turn the shutter sound on. It will sound when you press the <b>PHOTO</b> button.	-



The Beep Sound function is suspended in the following cases. It resumes automatically when the case no longer applies.

- During recording and playback
- Pause while recording
- When the camcorder has a cable connection. (AV cable)

## AUTO POWER OFF

You can set your camcorder to turn off automatically if it is idle for 5 minutes without an operation. This function will prevent unnecessary power consumption.

1. Press the **MENU** button → **Control (Left/Right)** button → “**Settings**” → **Control (Up/Down/OK)** button → “**Auto Power Off**.”




2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.
3. Press the **MENU** button to exit the menu.

### Submenu Items

Items	Use	On-screen display
<b>Off</b>	To disable the function.	-
<b>5 Min</b>	If the camcorder is idle for 5 minutes in STBY mode, the power is automatically turned off.	-



- Auto Power Off does not work in the following situations:
  - If the DC power cable (AC power adaptor, USB cable) is connected
  - While the following functions are in operation; “**Demo**,” “**Copy**,” “**Delete: All Files**,” “**Protect: All On**,” “**Combine**,” “**Divide**.”
  - While recording, playing (except pause), pausing while recording, or playing a photo slide show.
- To operate the camcorder again, press the **Power** (  ) button.

## PC SOFTWARE

If you set PC Software to On, you can use the built-in PC software easily by connecting a USB cable between the camcorder and your PC. Using the software, you can download stored video and photo images on the camcorder to your PC's hard disk. You can also edit video and photo files using the PC software.

1. Press the **MENU** button → **Control (Left/Right)** button → “**Settings**” → **Control (Up/Down/OK)** button → “**PC Software**.”



2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.
3. Press the **MENU** button to exit the menu.

### Submenu Items

Items	Use	On-screen display
<b>Off</b>	To disable the function.	-
<b>On</b>	To launch the built-in editing software when you connect the camcorder to a PC with a USB cable.	-

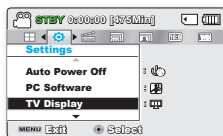


The PC Software is compatible with Windows operating systems only.

## TV DISPLAY

You can enable or disable the On Screen Display (OSD) that the camcorder can display on a TV screen when you connect your camcorder to a TV.

1. Press the **MENU** button → **Control (Left/Right)** button → “**Settings**” → **Control (Up/Down/OK)** button → “**TV Display.**”
2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.
3. Press the **MENU** button to exit the menu.



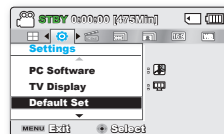
### Submenu Items

Items	Use	On-screen display
Off	To show the OSD (On Screen Display) menus only on the camcorder's LCD screen.	-
On	To show the OSD menus on the LCD screen and the TV screen as well. (Connecting to a TV ↪page 92)	-

## DEFAULT SET

You can restore all menu settings to their defaults.

1. Press the **MENU** button → **Control (Left/Right)** button → “**Settings**” → **Control (Up/Down/OK)** button → “**Default Set.**”
2. Select “**Yes**” if you want all the settings return to the default.
  - The Time Zone screen appears after all settings return to their defaults.
3. Set the date and time again. ↪page 28

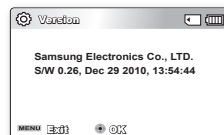


- Do not turn off the power while using this function.
- After resetting the camcorder, set “**Time Zone**” and “**Date/Time Set.**” ↪page 28
- Storage type is not restored after default setting. (SMX-F53/F54 only) ↪page 79

## VERSION

You can view the camcorder's firmware version. To improve the operation of the camcorder, the firmware version can be changed without notice.

1. Press the **MENU** button → **Control (Left/Right)** button → “**Settings**” → **Control (Up/Down/OK)** button → “**Version.**”
2. Press the **MENU** button to exit the menu.



## LANGUAGE

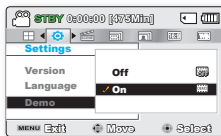
You can select a desired language to display the menu and messages in. ↪page 29



## DEMO

Demo mode automatically shows you the major functions that are included with your camcorder so that you can use them more easily.

1. Press the **MENU** button → **Control (Left/Right)** button → “**Settings**” → **Control (Up/Down/OK)** button → “**Demo**.”
2. Select the desired submenu item with the **Control (Up/Down)** button, and then press the **OK** button.
3. To return to the normal screen, press the **MENU** button.



## Using the Demo function

The camcorder cancels the Demo mode in the following cases:

- If you press any button (**Recording start/stop**, **PHOTO**, **SMART AUTO**, etc.) However, the camcorder will enter the Demo mode automatically after 5 minutes in STBY mode if it is idle for 5 minutes without operation. If you don't want the Demo function to start, set “**Demo**” to “**Off**.”



The Demo function does not operate in the following case:

- If “**Auto Power Off**” is set to “**5 Min**” when you are using the battery as the main power, the Auto Power Off function will turn the camcorder off before Demo can start.

### Submenu Items

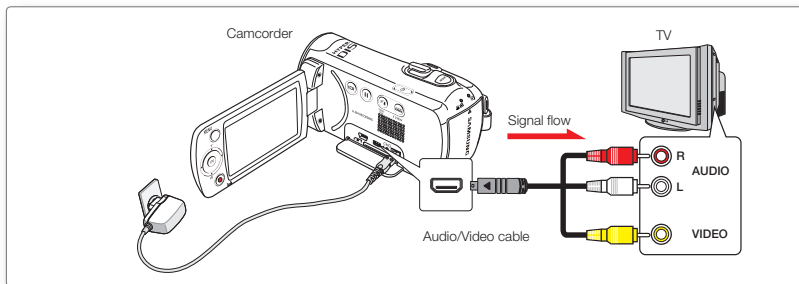
Items	Use	On-screen display
Off	To disable the function.	-
On	To enable the Demo function.	-

# Connecting to a TV

You can view the recorded videos and photos on a large screen by connecting the camcorder to a TV.

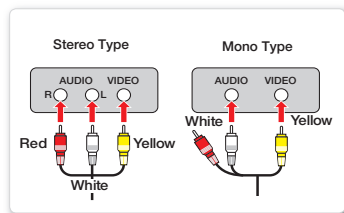
## CONNECTING TO A TV (16:9/4:3)

To playback your recordings, the television must be NTSC-compatible. We recommend that you use the AC power adaptor as a power source for the camcorder when you connect it to a TV. Check your TV's input jacks and select the appropriate connection method according to the jack type. For details, refer to your TV user manual.



Use the provided Audio/Video cable to connect the camcorder to a TV as follows:

1. Connect the provided Audio/Video cable to the Audio/Video jack on the TV.
2. Turn on your TV and set the TV's input selector to the Input your camcorder is connected to.
  - Refer to the TV's instruction manual to see how to select the TV input.



- If only a mono audio input is available on the TV set, use the white plug (audio L) on the audio cable.
- Do not use excessive force when connecting the cables.
- We recommend you use the AC power adaptor as the power source.
- Before connecting, make sure that the volume on the TV is turned down. Forgetting to do this may cause feedback from the TV speakers.
- Carefully connect the input and output cables to the corresponding connections on the TV.

## VIEWING ON A TV SCREEN

1. Turn on your TV and set the TV's input selector (source) to the input the camcorder is connected to. ➔page 92

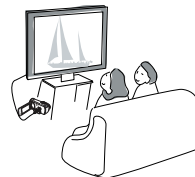
- Make sure the TV jacks are connected with the right cables.
- Make sure you've set the input source correctly to view the playback from the camcorder.

2. Select the playback mode on your camcorder, and then start to playback videos.

- Operate the camcorder using the camcorder's buttons and OSD menus.



- Adjust the volume to a moderate level. If the volume is too high, the video may include the noise.
- If the **"TV Display"** is set **"Off,"** the TV screen will not display the OSD (On Screen Display) menus. ➔page 90
- This camcorder does not output audio when the camcorder is connected to a TV in the video or photo record mode. The audio output signal is supported only when the camcorder is connected in the video playback mode. This is not an error.



## Image display depending on LCD and TV screen ratio

■ Icon

● Subject

	Video	Photo	LCD	TV	
				16:9	4:3
16:9					
4:3					

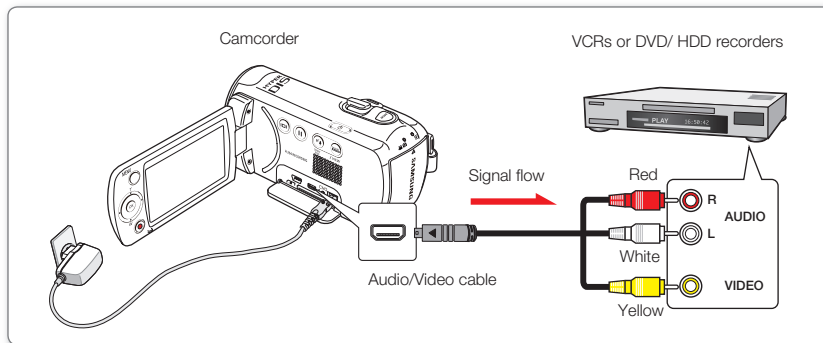


Refer to page 48 for the **"16:9 Wide"** setting.

# Dubbing videos

## DUBBING TO VCR OR DVD/HDD RECORDERS

You can dub images recorded on your camcorder to other recording devices, such as VCRs or DVD/HDD recorders. This is a convenient way of distributing the dubbed media. Connect the camcorder as illustrated below and use the AC power adaptor to power the camcorder. Refer to the instruction manuals supplied with your VCR, DVD, or HDD recorder for additional information about dubbing.



1. Turn on the camcorder and press the **MODE** button to select the Play mode. ➡ page 24
2. Insert the recording media in the recording device.
  - If your recording device has an input selector, set it to the input mode.
3. Connect your camcorder to the recording device (VCR or DVD/HDD recorders) with the supplied composite/AV cable.
4. Start the playback on your camcorder, and record it on the recording device.
  - Refer to the instruction manuals supplied with your recording device for details.
5. When dubbing is finished, stop the recording device, and then your camcorder.



- You can dub videos recorded on this camcorder by connecting it to another recording device with the supplied composite/AV cable. All the recorded videos will be dubbed in SD (standard definition) image quality.
- Since dubbing is performed via analog data transfer, the image quality may deteriorate.
- To hide the screen indicators (such as the counter, etc.) on the screen of a connected monitor device, set **"TV Display: Off."** ➡ page 90
- To record the date/time, display it on the LCD screen. ➡ page 84

# Using with a windows computer

## CHECKING YOUR COMPUTER TYPE

This chapter explains how to connect the camcorder to a Windows computer using a USB cable and how to use the editing software built in to your camcorder.

### Check the type of computer you have before connecting the camcorder!!

The camcorder and its built in software are compatible with Windows computers only. Check your computer before you begin and make make sure you have a Windows computer.



#### Using with Windows

Connect your camcorder to the computer using the USB cable.

- The built-in editing software, Intelli-studio, runs on the PC automatically once the camcorder is connected to a Windows computer. (When you specify **"PC Software: On"**). ➡ page 89

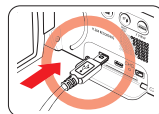
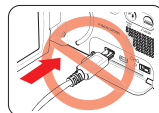
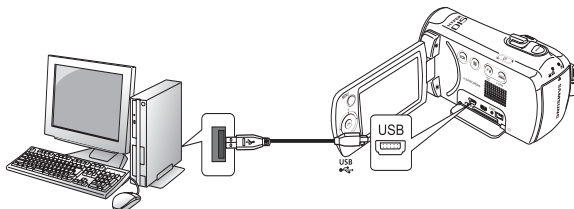
Play back or edit your recordings on the computer using the built-in, Intelli-studio application. ➡ page 97

You can also upload your recordings to YouTube or other websites using the Intelli-studio. ➡ page 100



#### Using with Macintosh

The built-in software on your camcorder, 'Intelli-studio' is not Macintosh compliant.



## WHAT YOU CAN DO WITH A WINDOWS COMPUTER

You can perform the functions below by connecting your camcorder to your Windows computer using a USB cable:

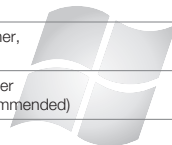
### Main Functions

- Intelli-studio's main functions:
  - Playing back recorded videos or photos. ➡ page 99
  - Editing recorded videos or photos. ➡ page 99
  - Uploading the recorded videos and photos to YouTube, Flickr or Facebook, etc. ➡ page 100
- You can transfer or copy the files (videos and photos) saved on the storage media into your computer (the mass storage function). ➡ page 101

### System Requirements

Your computer must meet the following requirements to run Intelli-studio:

Items	System Requirements
OS	Microsoft Windows XP SP2 , Vista, or Windows 7
CPU	Intel® Pentium® 4 3.0 GHz or higher is recommended AMD Athlon™ FX 2.6 GHz or higher is recommended
RAM	1GB or higher is recommended
Video Card	NVIDIA Geforce 7600GT or higher, Ati X1600 series or higher
Display	1024 x 768, 16-bit color or higher (1280 x 1024, 32-bit color recommended)
USB	USB 2.0
Direct X	DirectX 9.0c or higher



- System requirements mentioned above are recommendations. Even on a system that satisfies the requirements, Intelli-studio may not operate optimally.
- On a slower than recommended computer, video playback may skip frames or operate unexpectedly.
- If the version of DirectX on your computer is lower than 9.0c, install DirectX 9.0c or higher.
- We recommended you transfer recorded videos to a PC before playing back or editing the videos.
- To run Intelli-studio, a laptop computer requires faster and better components than a desktop PC.
- Intelli-studio is not Macintosh compatible.

## USING THE Intelli-studio PROGRAM

Intelli-studio is a built-in program that allows you to play back and edit files. You can upload files to web sites, such as YouTube or Flickr. For details, select **"Help" → "Help"** on the Intelli-studio screen.

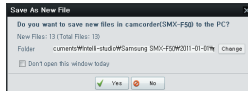
### Step 1. Connecting the USB cable

- 1 Set **"USB Connect: Mass Storage"** and **"PC Software: On"**.

- These are the default settings.

- 2 Connect the camcorder to a PC with the USB cable.

- A new file saving window appears along with the Intelli-studio main window. If your camcorder has no new files, the pop-up window for saving new files will not appear.
- Depending on your version of Windows, the Windows removable disk window may also appear.



### To disconnect the USB cable

To disconnect the USB cable after completing the file transfer, you must follow these steps:



1. Click the **"Safely Remove Hardware"** icon on the taskbar.
2. Select **"USB Mass Storage Device"**, and then click **"Stop"**.
3. If the **"Stop a Hardware device"** window appears, click **"OK"**.
4. Disconnect the USB cable from the camcorder and PC.



- Use the provided USB cable. (Supplied by Samsung)
- Make sure you insert the USB plug into the USB jack with the plug facing in the correct direction.
- Use the AC power adaptor to power the camcorder when transferring files to your computer.
- When the USB cable is connected, turning the camcorder on or off may cause the PC to malfunction.
- If you disconnect the USB cable from the PC or the camcorder while transferring files, the data transmission will stop and the data may be damaged.
- If you connect the camcorder to a PC via a USB HUB or simultaneously connect the camcorder along with other USB devices, the camcorder may not work properly. If this occurs, remove all USB devices from the PC, and then reconnect the camcorder.
- Intelli-studio may not automatically run. If this occurs, access My Computer or Windows Explorer, open the drive that corresponds to your camcorder, find Intelli-studio, and then run iStudio.exe.

## Step 2. About the Intelli-studio main window

When the Intelli-studio starts up, video and photo thumbnails are displayed in the main window.



- If you install Intelli-studio on your PC, the program will launch more quickly. To install the program, select **"Tool"** → **"Install Intelli-studio on PC"**.
- If you install the full version of Intelli-studio software, you can use various functions. Start the installation by clicking on **"Web Support"** → **"Update Intelli-studio"** → **"Start Update"**.
- The camcorder's built-in Intelli-studio software is intended for home use. It is not for precision or industrial productions. For these applications, we recommend an editing software designed for professional use.

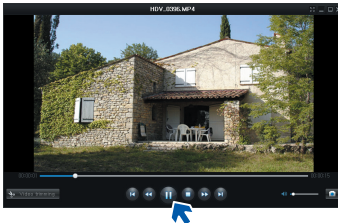
No.	Description
1	Menu items
2	Display files in the selected folder.
3	Switch to Photo edit mode.
4	Switch to Video edit mode.
5	Switch to Share mode.
6	Enlarge or reduce the thumbnails in the list.
7	Select a file type.
8	View videos and photos of the selected folder on your computer.
9	Show or hide videos and photos of the connected device.
10	View videos and photos of the selected folder on the device.
11	View files as thumbnails or on a map
12	Browse folders in the connected device.
13	Browse folders stored on your computer
14	Move to the previous or next folder
15	Print files, view files on a map, store files in Contents Manager, or register faces.



### Step 3. Playing back videos or photos

You can play back the recordings conveniently using the Intelli-studio application.

- 1 With Intelli-studio, click the desired folder to display your recordings.
  - Video or photo thumbnails appear on the screen, depending on the folder you selected.
- 2 Choose the video or photo that you want to play.
  - You can view the file information by moving the mouse over the file.
  - If you click a video thumbnail once, the video plays back inside the thumbnail frame, allowing you to search for a desired scene with ease.
- 3 After you select the video or photo you want, double-click to play back.
  - Playback starts and the controls appear.



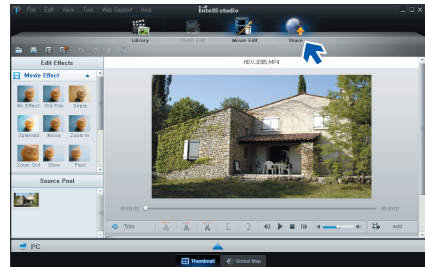
Intelli-studio supports the following file formats:

- Video formats: MP4 (Video: H.264, Audio: AAC), WMV (WMV 7/8/9)
- Photo formats: JPG, GIF, BMP, PNG, TIFF

### Step 4. Editing videos or photos

You can edit the videos or photos in various ways with various functions. (Change Size, Fine-Tuning, Image Effect, Insert Frame, etc.) Before editing a video or photo in Intelli-studio, make a backup copy of the video or photo file and store it on your computer for safe-keeping using My Computer or Windows Explorer.

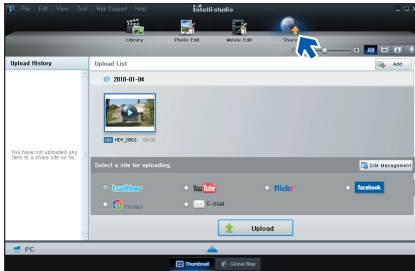
- 1 Choose the videos or photos you want to edit.
- 2 Click "**Movie Edit**" or "**Photo Edit**" according to the selected file on the Intelli-studio browser.
  - The selected file appears in the editing window.
- 3 Edit a video or photo with various edit functions.



### Step 5. Sharing the videos/photos online

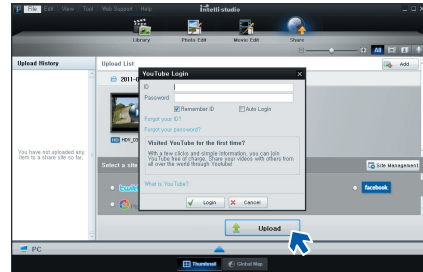
Share your contents with the world by uploading photos and videos directly to a web site with one click.

- 1 Choose the videos or photos you want to share.
- 2 Click **"Share"** on the Intelli-studio browser.
  - The selected file appears in the sharing window.



- 3 Click the web site you would like to upload files to.
  - You can choose "YouTube", "twitter", "Flickr", "Facebook", "Picasa", "Email", or another web site you want to use for your site management.

- 4 Click **"Upload"** to start uploading.
  - A pop up window appears asking for your ID and password.



- 5 Enter your ID and the password to access.
  - Access to the web site contents can be limited depending on your web access environment.

### Exporting the videos/photos to your computer

You can export the recorded videos/photos from your camcorder to a PC.

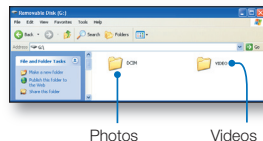
1. Select the desired files to export.
2. Drag and drop the selected files to the My Computer library window.

## USING AS A REMOVABLE STORAGE DEVICE

You can transfer recorded data to a Windows computer by connecting the USB cable to the camcorder.

### Viewing and transferring the contents of storage media

1. Set **"PC Software to Off"**  
↳ page 89
2. Check the storage media.  
(If you have video or photos recorded on a memory card, insert a memory card.)  
(SMX-F53/F54 only)
3. Connect the camcorder to the PC with the USB cable.  
↳ page 95
  - The "Removable Disk" or "Samsung" window appears on the PC's screen after a moment.
  - Select "Open folders to view files using Windows Explorer" and then click "OK."



4. The folders in the storage media appear.
  - Different file types are stored in different folders.
5. Copy and paste or drag and drop the files from the storage media to your PC.



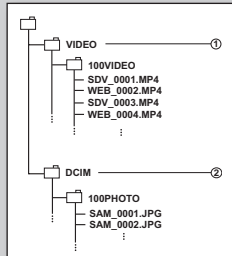
- If the "Removable Disk" window does not appear, confirm the connection (↳ page 95) or repeat steps 1 through 3 again.
- When the removable disk does not appear automatically, open the removable disk folder of My Computer.
- If the connected camcorder's disk drive does not open or the context menu that appears when right-clicking your mouse (open or browse) appears broken, your computer may be infected by an Autorun virus. Be sure to update your antivirus software to the latest version.

### Structure of folders and files on the storage media

- The folder and file structure for built-in memory or memory card is as follows.
- Don't arbitrarily change or remove the folder or file name. It may not be playable.

#### Videos (H.264) ①

- The SD-quality videos have a "SDV\_####.MP4" format and Web videos have a "WEB\_####.MP4" format.
- The file number automatically increases when a new video clip file is created.
- Up to 9,999 files can be stored in one folder. A new folder is created when the number overflows in a folder exceeds 9,999.



#### Photos ②

- As with video clip files, the file number automatically increases when a new image file is created.
- Photo files have a SAM\_####.JPG format. A new folder stores files starting with SAM\_0001.JPG.
- Folder names increase in this order: 100PHOTO → 101PHOTO etc.
- Up to 9,999 files can be stored in one folder. A new folder is created when the number of files in a folder exceeds 9,999.

### File format

#### Video files

- Videos are compressed in H.264 format. The file extension is ".MP4."
- Refer to page 47 for video resolution.

#### Photo files

- Photos are compressed in JPEG (Joint Photographic Experts Group) format. The file extension is ".JPG."
- Refer to page 48 for photo resolution.



Do not modify the name of a movie file recorded by the camcorder. Proper playback by the camcorder requires the original folder and file name.

# Troubleshooting

## TROUBLESHOOTING








- ✱ Before contacting a Samsung authorised service center, perform the following simple checks. They may save you the time and expense of an unnecessary call.

### Warning indicators and messages

#### Power source

Message	Icon	Informs that...	Action
Low Battery	-	The battery is almost discharged.	<ul style="list-style-type: none"><li>Replace with a charged battery or use the AC power adaptor. Charge the battery.</li></ul>
Check authenticity of the battery.	-	The battery failed to authenticate.	<ul style="list-style-type: none"><li>Check the battery's authenticity. Change to an authentic, charged Samsung battery.</li><li>Use only genuine Samsung batteries only with this camcorder.</li></ul>

#### Storage media

Message	Icon	Informs that...	Action
Memory Full (SMX-F53/F54 only)		There is not enough space to record in the built-in memory.	<ul style="list-style-type: none"><li>Delete unnecessary files in the built-in memory. Use a memory card.</li><li>Back-up files to your PC or another storage media and delete files.</li></ul>
Insert Card		There is no memory card inserted in the card slot.	<ul style="list-style-type: none"><li>Insert a memory card.</li></ul>
Card Full		There is not enough space to record on a memory card.	<ul style="list-style-type: none"><li>Delete unnecessary files on the memory card. Use the built-in memory. (SMX-F53/F54 only)</li><li>Back-up files to your PC or another storage media and delete files.</li><li>Change to another memory card which has enough free space.</li></ul>
Card Error		The memory card has some problem and cannot be recognized.	<ul style="list-style-type: none"><li>Format the memory card or replace it with a new one.</li></ul>
Card Locked		The write protection tab on an memory card has been set to lock.	<ul style="list-style-type: none"><li>Release the write protection tab.</li></ul>
Not Supported Card		The memory card is not supported in this camcorder.	<ul style="list-style-type: none"><li>Change to a memory card that we recommended.</li></ul>
Please format		The memory card is not formatted.	<ul style="list-style-type: none"><li>Format the memory card using the menu.</li></ul>

Message	Icon	Informs that...	Action
Not formatted. Format the Card? (Format the Internal Memory?)	-	The format of the file is not supported by this camcorder.	<ul style="list-style-type: none"> <li>The file format is not supported. Check supported file listing.</li> <li>Format the memory card using menu item.</li> </ul>
Low speed card. Please record a lower resolution.	-	The memory card does not have enough speed to record.	<ul style="list-style-type: none"> <li>Record video at a lower resolution.</li> <li>Change the memory card to a faster one. ➡ page 32</li> </ul>

### Recording

Message	Icon	Informs that...	Action
Write Error	-	Some problems occurred while writing data to storage media.	<ul style="list-style-type: none"> <li>Format storage media using menus after backing-up important files to your PC or another storage media.</li> </ul>
Release the Smart Auto	-	You cannot operate some functions manually when SMART AUTO is activated.	<ul style="list-style-type: none"> <li>Release the SMART AUTO function</li> </ul>
Recovering Data...	-	The file was not created normally.	<ul style="list-style-type: none"> <li>Wait until data recovery is finished.</li> <li>Never turn off the power and eject the memory card during recording.</li> </ul>

### Playback

Message	Icon	Informs that...	Action
Read Error	-	Some problems occurred when reading data from storage media.	<ul style="list-style-type: none"> <li>Format the storage media using the menu after backing up important files to PC or another storage device.</li> </ul>
The Number of video files is full. Cannot copy videos.	-	Folder and files have reached capacity and you cannot record.	<ul style="list-style-type: none"> <li>Format the storage media using the menu after backing up important files to your PC or another storage device. Set "File No." to "Reset."</li> </ul>
The Number of photo files is full. Cannot copy photos.	-	Folder and files have reached their capacity and you cannot take a picture.	<ul style="list-style-type: none"> <li>Format the storage media using the menu after backing up important files to your PC or another storage device. Set "File No." to "Reset."</li> </ul>

### Symptoms and solutions

If these instructions do not solve your problem, contact the nearest Samsung authorised service center.

#### Power

Symptom	Explanation/Solution
The camcorder does not turn on.	<ul style="list-style-type: none"> <li>The battery may not be installed on your camcorder. Insert a battery into the camcorder.</li> <li>The inserted battery may be discharged. Charge the battery or replace it with a charged one.</li> <li>If you use an AC power adaptor, make sure it is properly connected to the wall outlet.</li> <li>Remove the battery or unplug the AC power adaptor, and then reconnect the power supply to the camcorder before turning it on.</li> </ul>
The power automatically turns off.	<ul style="list-style-type: none"> <li>Is <b>"Auto Power Off"</b> set to <b>"5 Min"</b> ? If no button is pressed for about 5 minutes, the camcorder is automatically turned off (<b>"Auto Power Off"</b>). To disable this option, change the setting of <b>"Auto Power Off"</b> to <b>"Off."</b> ➔ page 89</li> <li>The battery is almost discharged. Charge the battery or replace it with a charged one.</li> <li>Use the AC power adaptor.</li> </ul>
Power cannot be turned off .	<ul style="list-style-type: none"> <li>Remove the battery or unplug the AC power adaptor, and then reconnect the power supply to the camcorder before turning it on.</li> </ul>
The battery is quickly discharged.	<ul style="list-style-type: none"> <li>The temperature is too low.</li> <li>The battery is not fully charged. Recharge the battery.</li> <li>The battery has reached the end of its lifespan and cannot be recharged. Use another battery.</li> </ul>

#### Displays

Symptom	Explanation/Solution
The TV screen or LCD display has distorted images or has stripes at the top/ bottom or on the left/right.	<ul style="list-style-type: none"> <li>This can occur when recording or viewing a 16:9-ratio image on a 4:3-ratio TV, or vice versa. For more details, see the display specification.</li> </ul>
Unknown image appears on the LCD screen.	<ul style="list-style-type: none"> <li>The camcorder is in Demo mode. If you do not want to see Demo images, change the setting of <b>"Demo"</b> to <b>"Off."</b> ➔ page 91</li> </ul>

### Displays

Symptom	Explanation/Solution
Unknown indicator appears on the screen.	<ul style="list-style-type: none"> <li>A warning indicator or message appears on the screen. ➡ pages 103~105</li> </ul>
An after image remains on the LCD screen.	<ul style="list-style-type: none"> <li>This occurs if you disconnect the AC power adaptor or remove the battery before turning the power off.</li> </ul>
The image on the LCD screen looks dark.	<ul style="list-style-type: none"> <li>Ambient light is too bright. Adjust the brightness and angle of the LCD.</li> <li>Use the LCD Enhancer function.</li> </ul>

### Storage media

Symptom	Explanation/Solution
Memory card functions are not operable.	<ul style="list-style-type: none"> <li>Insert a memory card into your camcorder properly. ➡ page 31</li> <li>If you use a memory card formatted on a computer, format it again directly on your camcorder. ➡ page 80</li> </ul>
Image cannot be deleted.	<ul style="list-style-type: none"> <li>You cannot delete the images protected by another device. Release the protection of the image on the device. ➡ page 70</li> <li>Release the lock on the write-protect tab of the memory card (SDHC memory card, etc.), if any. ➡ page 32</li> </ul>
You cannot format the memory card.	<ul style="list-style-type: none"> <li>Release the lock on the write-protect tab of the memory card (SDHC memory card, etc.), if any. ➡ page 32</li> <li>Copy all important recorded files to your PC before formatting. Samsung shall not be responsible for any loss of data. (You should copy the data to your PC or other storage media.)</li> </ul>
The data file name is not indicated correctly.	<ul style="list-style-type: none"> <li>The file may be corrupted.</li> <li>The file format is not supported by your camcorder.</li> <li>Only the file name is displayed if the directory structure does not comply with the international standard.</li> </ul>
Does not charge or operate even if the battery is inserted.	<ul style="list-style-type: none"> <li>Check whether you're using a Samsung battery. A non-Samsung battery may not be recognized properly by the camcorder.</li> </ul>



### Recording

Symptom	Explanation/Solution
Pressing the <b>Recording start/stop</b> button does not start recording.	<ul style="list-style-type: none"> <li>There is not enough free space to record on the the storage media.</li> <li>Make sure the memory card is inserted and write-protect tab is set to unlock.</li> <li>The internal temperature of your camcorder is unusually high. Turn off your camcorder and leave it for a while in a cool place.</li> <li>Your camcorder is damp and moist inside (condensation). Turn off your camcorder and leave it for about 1 hour in a cool place.</li> </ul>
The actual recording time is less than the estimated time.	<ul style="list-style-type: none"> <li>The estimated recording time may vary depending on the contents and the features you use.</li> <li>Recording a fast-moving subject increases the bit rate and consequently the amount of storage space required for the recording, which can lead to a shorter available recording time.</li> </ul>
The recording stops automatically.	<ul style="list-style-type: none"> <li>There is no more free space for recording on the storage media. Back up important files to your PC, and then format the storage media or delete the unnecessary files.</li> <li>If you frequently record or delete files, the performance of the built-in memory will deteriorate. In this case, reformat the built-in memory.</li> <li>If you use a memory card with a low writing speed, the camcorder automatically stops recording the videos and the corresponding message appears on the LCD screen.</li> </ul>
When recording a subject illuminated by bright light, vertical lines appear.	<ul style="list-style-type: none"> <li>The camcorder is unable to record these levels of brightness.</li> </ul>

Symptom	Explanation/Solution
When the screen is exposed to direct sunlight during recording, the screen turns red or black for an instant.	<ul style="list-style-type: none"> <li>Do not expose the LCD screen to direct sunlight.</li> </ul>
During recording, the date/time does not display.	<ul style="list-style-type: none"> <li>Set <b>"Date/Time Display"</b> to on. ➔page 84</li> </ul>
The beep sound is not heard.	<ul style="list-style-type: none"> <li>Set the "Beep Sound" to <b>"On."</b></li> <li>The beep sound is temporally off while the camcorder records videos.</li> <li>When the Audio/Video cable jack is connected to the camcorder, the beep sound will automatically turn off.</li> </ul>
There is a time difference between the point where you press the Recording start/stop button and the point where the recorded video starts/stops.	<ul style="list-style-type: none"> <li>On your camcorder, there may be a slight time delay between the point where you press Recording start/stop button and the actual point where the recorded video starts/stops. This is not an error.</li> </ul>
The recording stops.	<ul style="list-style-type: none"> <li>The internal temperature of your camcorder is unusually high. Turn off your camcorder and leave it for a while in a cool place.</li> <li>Your camcorder is damp and moist inside (condensation). Turn off your camcorder and leave it for about 1 hour in a cool place.</li> </ul>
You cannot record a photo image.	<ul style="list-style-type: none"> <li>Set your camcorder to Record mode. ➔page 24</li> <li>Release the lock on the write-protection tab of the memory card if set.</li> <li>The storage media is full. Use a new memory card or format the storage media. ➔page 80</li> <li>Remove unnecessary images. ➔page 69</li> </ul>

### Adjusting the image during recording

Symptom	Explanation/Solution
Focus does not adjust automatically.	<ul style="list-style-type: none"> <li>Set <b>"Focus"</b> to <b>"Auto."</b> ➔ page 56</li> <li>The recording conditions are not suitable for auto focus. Adjust the focus manually. ➔ page 57</li> <li>The lens is dusty on the surface. Clear the lens and check the focus.</li> <li>You are recording in a dark place. Increase the brightness.</li> </ul>
The image appears too bright or flickering, or changes in color.	<ul style="list-style-type: none"> <li>This occurs when recording images under a fluorescent lamp, sodium lamp, or mercury lamp. Cancel <b>"iSCENE"</b> to minimise these phenomena. ➔ page 46</li> </ul>

### Playback on your camcorder

Symptom	Explanation/Solution
Pressing the playback (Play/Pause) button did not start playing.	<ul style="list-style-type: none"> <li>Press the <b>MODE</b> button to set Video Play mode.</li> <li>Image files recorded on another camcorder may not play on your camcorder.</li> <li>Check out memory card compatibility. ➔ page 32</li> </ul>
The Skip or Search function does not work properly.	<ul style="list-style-type: none"> <li>If the temperature inside the camcorder is too high, it cannot function properly. Turn the camcorder off, wait for a few moments, and turn it on again.</li> </ul>
Playback is interrupted unexpectedly.	<ul style="list-style-type: none"> <li>Check if the AC adaptor or battery is properly connected and stable.</li> </ul>
You cannot hear sound when playing a Time Lapse recording.	<ul style="list-style-type: none"> <li>The Time Lapse REC function does not record sound. ➔ page 63</li> </ul>
Photos stored on a storage media are not displayed in the actual size.	<ul style="list-style-type: none"> <li>Photos recorded on other devices may not appear at actual size. This is not an error.</li> </ul>

### Playback on other devices (TV, etc.)

Symptom	Explanation/Solution
You cannot view the image or hear the sound on the connected device.	<ul style="list-style-type: none"> <li>Connect the audio line of the Audio/Video cable jack to your camcorder and the connected device (TV, DVD recorder, etc). (Red color- right, White color- left)</li> <li>The Audio/Video cable jack is not connected properly. Make sure that the Audio/Video cable jack is connected to the proper jack. ➔ page 94</li> </ul>

### Connecting to a computer

Symptom	Explanation/Solution
When accessing videos, a computer does not recognize your camcorder.	<ul style="list-style-type: none"> <li>• Disconnect the USB cable from the computer and camcorder, restart the computer, then reconnect it correctly.</li> </ul>
Cannot play a video file properly on a PC.	<ul style="list-style-type: none"> <li>• A video codec is needed to play the file recorded on your camcorder. Install or run the built-in edit software (Intelli-studio).</li> <li>• Make sure you insert the connector in the correct direction, and connect the USB cable to the USB jack on your camcorder firmly.</li> <li>• Disconnect the cable from the computer and camcorder, restart the computer. Reconnect it properly.</li> <li>• Your computer may not have the necessary performance specifications to playback a video file. Check the recommended computer specifications.</li> </ul>
Intelli-studio does not function properly.	<ul style="list-style-type: none"> <li>• Exit the Intelli-studio application, and restart the Windows computer.</li> <li>• Intelli-studio is not Macintosh compliant.</li> <li>• Set <b>"PC Software"</b> to <b>"On"</b> in the Settings menu.</li> <li>• The Intelli-studio program may not run automatically. If this occurs, open the CD-ROM drive that has the Intelli-studio program on it in My Computer, and then run iStudio.exe.</li> </ul>
The image or sound on your camcorder is not played on your computer properly.	<ul style="list-style-type: none"> <li>• Video playback or sound may stop temporarily depending on your computer. The video or sound of files copied to your computer are not affected.</li> <li>• If your camcorder is connected to a computer that does not support Hi-speed USB (USB2.0), the images or sound may not be played back correctly. The video and sound files copied to your computer are not affected.</li> </ul>
The playback screen is paused or distorted.	<ul style="list-style-type: none"> <li>• Check the system requirements to play a video. ↪ page 96</li> <li>• Exit all other applications running on the computer.</li> <li>• If a recorded video is played on your camcorder when it is connected to a computer, the image may not play smoothly, depending on the transfer speed. Please copy the file to your PC, and then play it back.</li> </ul>

### Connecting to a computer

Symptom	Explanation/Solution
You cannot dub correctly using the Audio/Video cable.	<ul style="list-style-type: none"> <li>• The Audio/Video cable is not connected properly. Make sure that the Audio/Video cable is connected to the proper jacks, i.e. to the input jacks of the device used for dubbing an image from your camcorder. ↪ page 94</li> </ul>

## General operations

Symptom	Explanation/Solution
The date and time are incorrect.	<ul style="list-style-type: none"> <li>Has the camcorder been left unused for a long period of time? The backup built-in rechargeable battery may be discharged. ➡page 28</li> </ul>
Pressing a button will not turn on or operate the computer.	<ul style="list-style-type: none"> <li>Remove the battery or unplug the AC power adaptor, and then reconnect the power supply to the camcorder before turning it on.</li> </ul>

## Menu

Symptom	Explanation/Solution																										
Menu items are grayed out.	<ul style="list-style-type: none"><li>• You cannot select grayed items in the current recording/playback mode.</li><li>• Most of the menu items cannot be selected when you set the SMART AUTO function.</li><li>• If there is no storage media inserted, it cannot be selected and storage media functions will be dimmed on the menu : <b>“Storage Type,” “Storage Info,” “Format,”</b> etc.</li><li>• There are some functions you cannot activate simultaneously. The following list shows examples of unworkable combinations of functions and menu items. If you want to set the desired functions, do not set the following items first.</li></ul>																										
	<table><tr><th>&lt;Cannot Use&gt;</th><th>&lt;Because of the following setting&gt;</th></tr><tr><td>"Anti-Shake(HDIS)"</td><td>"Video Resolution : Web Fine, Web Normal"</td></tr><tr><td>"Back Light"</td><td>"C.Nite"</td></tr><tr><td>"C.Nite"</td><td>"iSCENE"</td></tr><tr><td>"Focus : Face Detection"</td><td>"C.Nite", "iSCENE", "Aperture : Manual", "Shutter Speed : Manual", "Digital Effect", "Video Resolution : Web Fine, Web Normal"</td></tr><tr><td>"Digital Effect : Mirror, Mosaic, Step printing"</td><td>"C.Nite", "16:9 Wide: On", "Anti-Shake(HDIS): On." "Intelli-Zoom"</td></tr><tr><td>"Fader"</td><td>"Time Lapse REC"</td></tr><tr><td>"Shutter Speed : Manual"</td><td>"C.Nite", "Aperture : Manual"</td></tr><tr><td>"Aperture : Manual"</td><td>"C.Nite", "Shutter Speed : Manual"</td></tr><tr><td>"Zoom Type : Intelli-Zoom"</td><td>"16:9 Wide : Off", "Video Resolution : Web Normal, Web Fine" " Digital Effect : Mirror, Mosaic, Step printing"</td></tr><tr><td>"Zoom Type : Digital Zoom"</td><td>"C.Nite", "Digital Effect : Mirror, Mosaic, Step printing", "Anti-Shake(HDIS)", "Video Resolution : Web Fine, Web Normal"</td></tr><tr><td>"16:9 Wide"</td><td>"Video Resolution : Web Fine, Web Normal"</td></tr><tr><td>"White Balance"</td><td>"Digital Effect : Sepia"</td></tr></table>	<Cannot Use>	<Because of the following setting>	"Anti-Shake(HDIS)"	"Video Resolution : Web Fine, Web Normal"	"Back Light"	"C.Nite"	"C.Nite"	"iSCENE"	"Focus : Face Detection"	"C.Nite", "iSCENE", "Aperture : Manual", "Shutter Speed : Manual", "Digital Effect", "Video Resolution : Web Fine, Web Normal"	"Digital Effect : Mirror, Mosaic, Step printing"	"C.Nite", "16:9 Wide: On", "Anti-Shake(HDIS): On." "Intelli-Zoom"	"Fader"	"Time Lapse REC"	"Shutter Speed : Manual"	"C.Nite", "Aperture : Manual"	"Aperture : Manual"	"C.Nite", "Shutter Speed : Manual"	"Zoom Type : Intelli-Zoom"	"16:9 Wide : Off", "Video Resolution : Web Normal, Web Fine" " Digital Effect : Mirror, Mosaic, Step printing"	"Zoom Type : Digital Zoom"	"C.Nite", "Digital Effect : Mirror, Mosaic, Step printing", "Anti-Shake(HDIS)", "Video Resolution : Web Fine, Web Normal"	"16:9 Wide"	"Video Resolution : Web Fine, Web Normal"	"White Balance"	"Digital Effect : Sepia"
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	"White Balance"	"Digital Effect : Sepia"																									

# Maintenance & additional information

## MAINTENANCE

The suggestions below will help you fulfill any warranty obligations and allow you to enjoy this product for many years.

### Cautions when storing

- For safekeeping of the camcorder, turn off the camcorder.
  - Remove the battery and AC power adaptor.
  - Remove the memory card.

### Cleaning the camcorder

**Before cleaning, turn off the camcorder and remove the battery and AC power adaptor.**

- **To clean the exterior**
  - Wipe gently with a soft dry cloth. Do not apply excessive force when cleaning. Gently rub the surface.
  - Do not use benzene or thinner to clean the camcorder. The exterior coating could peel off or the case could deteriorate.
- **To clean the LCD screen**

Wipe very gently with a soft dry cloth. Be careful not to damage the screen.
- **To clean the lens**

Use a blower brush to remove dust, and then wipe the lens gently with a soft cloth.

If necessary, wipe gently with lens paper or tissue.

  - Mould may form if the lens is left dirty.
  - If the lens looks dim, turn off the camcorder and leave it off for about 1 hour.

### LCD screen

**To prolong its service life, do not rub the LCD screen with a coarse cloth.**

- **Be aware of the following LCD screen phenomena. They are not malfunctions.**
  - When you use the camcorder, the surface around the LCD screen may heat up.
  - If you leave the power on for a long time, the surface around the LCD screen becomes hot.

- When using the camcorder in cold conditions, an afterimage may appear on the LCD screen.
- An LCD screen is manufactured using advanced technology which creates screens with pixel failure rates of less than 0.01%. However, a black or bright spot (red, blue, white) may appear in the center of the LCD screen and up to two spots may appear outside the center. These spots, which are normally incurred during the manufacturing process, do not affect the recorded images.

### When there is dew condensation, put the camcorder aside for a while before using

- What is dew condensation?

Dew condensation happens when a camcorder is moved to a location where there is a significant temperature difference from the previous location. The dew condenses on the external or internal parts of the camcorder, and on the reflection lens. If there is dew on or in your camcorder, it may cause the camcorder to malfunction or damage the camcorder when you turn the power on.
- Exactly when does dew condensation occur?

When you move the camera to a location with a higher temperature than the previous location, or when you move it to a hot area suddenly.

Examples:

  - You record outside in cold weather during the winter and then move the camera indoors.
  - You record outside in hot weather after being indoors or inside a car where the A/C was running.
- What can I do?
  - Turn the power off, detach the battery, and leave the camcorder in a dry area for 1~2 hours before using it.



- Use the camcorder only after dew condensation has completely disappeared.
- Be sure to use the recommended accessories supplied with the camcorder. For service, contact your nearest Samsung authorized service center.

### USING YOUR CAMCORDER ABROAD

- Each country or region has its own electric and color systems.
- Before using your camcorder abroad, check the following items.

#### Power sources

The AC adaptor provided lets you power, recharge, and use your camcorder in any country/region that has AC power in the 100 V to 240 V, 50/60 Hz range. You may need a commercially available AC plug adaptor depending on the design of local wall outlets.

#### On TV color systems

Your camcorder is an **NTSC** based camcorder. If you want to view your recordings on a TV or copy them to an external device, it must be an **NTSC** based TV or external device and have the appropriate Audio/Video jacks. Otherwise, you may need to use a separate video format transcoder (For example, an NTSC to PAL format converter).



The format transcoder is not provided by Samsung.

#### NTSC-compatible countries/regions

Bahamas, Canada, Central America, Japan, Korea, Mexico, Philippines, Taiwan, United States of America, etc.

#### PAL-compatible countries/regions

Australia, Austria, Belgium, Bulgaria, China, CIS, Czech Republic, Denmark, Egypt, Finland, France, Germany, Greece, Great Britain, Holland, Hong Kong, Hungary, India, Iran, Iraq, Kuwait, Libya, Malaysia, Mauritius, Norway, Romania, Saudi Arabia, Singapore, Slovak Republic, Spain, Sweden, Switzerland, Syria, Thailand, Tunisia, etc.



You can make recordings with your camcorder and view pictures on the LCD screen anywhere in the world.

## GLOSSARY

### AF (Auto Focus)

A system that automatically focuses the camcorder lens on the subject. Your camcorder uses the contrast to focus automatically.

### Aperture

The aperture controls the amount of light that reaches the camcorder's sensor.

### Camcorder shake (Blur)

If the camcorder is moved while the shutter is open, the entire image may appear blurred. This occurs more often when the shutter speed is slow. Prevent camcorder shake by raising the sensitivity, using a faster shutter speed. Alternately, use a tripod, the DIS or OIS function to stabilize the camcorder.

### Composition

Composition in photography means arranging objects in a photo. Usually, abiding by the rule of thirds leads to a good composition.

### Complementary Metal-Oxide-Semiconductor (CMOS)

CMOS is an image sensor producing images approaching the quality of CCD (charge coupled device) sensors. It consumes less power, meaning a longer battery life on your camcorder.

### Digital zoom

A feature that artificially increases the amount of zoom available with zoom lens (Optical zoom). When using the Digital zoom, the image quality will deteriorate as the magnification increases.

### Effective Pixel Count

Unlike the total pixel count, this is the actual number of pixels used to capture an image.

### EV (Exposure Value)

All the combinations of the camcorder's shutter speed and lens aperture that result in the same exposure.

### Exposure

The amount of light allowed to reach the camcorder's sensor. Exposure is controlled by a combination of the shutter speed, the aperture value, and ISO sensitivity.

### Focal length

The distance from the middle of the lens to its focal point (in millimeters). Longer focal lengths result in narrower angles of view and the subject is magnified. Shorter focal lengths result in wider angles of view.

### F. No (F-Number)

The f-number defines the brightness of lens. Smaller number lens has generally brighter image. The f-number is directly proportional to the focal length and inversely proportional to the lens diameter.

\*F.No=focal length/diameter of lens aperture

### MPEG-4 AVC/H.264

MPEG-4 AVC/H.264 defines the latest video coding format standardized by the ISO/IEC and the ITU-T, in 2003. Compared with the conventional MPEG-2 format, MPEG-4 AVC/H.264 has more than twice the efficiency. Your camcorder employs MPEG-4 AVC/H.264 to encode high definition videos.

### Optical zoom

This is a general zoom which can enlarge images with a lens and does not deteriorate quality of images.

### Quality

An expression of the rate of compression used in a digital image. Higher quality images have a lower rate of compression, which usually results in a larger file size.

### Resolution

The number of pixels present in a digital image. High resolution images contain more pixels and typically show more detail than low resolution images.

### Shutter speed

Shutter speed refers to the amount of time it takes to open and close the shutter, and it is an important factor in the brightness of a photo, as it controls the amount of light which pass through the aperture before it reaches the image sensor. A fast shutter speed allows less time to let light in and the photo becomes darker and more easily freezes subjects in motion.

### White balance (color balance)

An adjustment of the intensities of colors (typically the primary colors red, green, and blue), in an image. The goal of adjusting the white balance, or color balance, is to correctly render the colors in an image.



# Specifications

<b>Model name</b>	SMX-F50BN/SMX-F50RN/SMX-F50SN/SMX-F50UN SMX-F53BN/SMX-F53RN/SMX-F53SN/SMX-F53UN SMX-F54BN/SMX-F54RN/SMX-F54SN/SMX-F54UN SMX-F500BN/SMX-F500RN/SMX-F500SN/SMX-F500UN SMX-F530BN/SMX-F530RN/SMX-F530SN/SMX-F530UN	
<b>System</b>	Video signal	NTSC
	Picture compression format	H.264/AVC Format
	Audio compression format	AAC (Advanced Audio Coding)
	Recording resolution	TV Super Fine (about 5.0Mbps), TV Fine (about 4.0Mbps), TV Normal (about 3.0Mbps), Web Fine (about 4.0Mbps), Web Normal (about 3.0Mbps)
	Image device	1/6" CCD (Charge Coupled Device)
	Effective pixels	630K
	Total pixels	680K
	Lens	F1.8 to 4.9, 52x (Optical), 65x (Intelli), 2200x (Digital) Electronic zoom lens
<b>LCD screen</b>	Focal length	2.1mm~109.2mm
	Size/dot number	2.7 inches wide, 230k
<b>Connectors</b>	LCD screen method	TFT active matrix system
	Composite video out	1.0V (p_p), 75Ω, analog
	Audio output	-7.5dBm 47KΩ, analog, stereo
<b>General</b>	USB output	mini USB-B type (USB2.0 High Speed)
	Power source	5.0V (Using AC adaptor), 3.7V (Using Lithium Ion battery)
	Power source type	Power supply (100V~240V) 50/60Hz, Lithium Ion battery
	Power consumption	1.7W, 2.0W( LCD on)
	Operating temperature	0°C~40°C (32°F~104°F)
	Operating humidity	10% ~80%
	Storage temperature	-20°C ~ 60°C (-4°F ~ 140°F)
	Dimensions (W x H x D)	Approx. 2.05"×2.3"×4.43" (53.9mm×56.4mm×119.0mm)
	Weight	Approx. 220g (0.485lb) (without battery and memory card)
	Internal MIC	Omni-directional stereo microphone

※ These technical specifications and design may be changed without notice.

# Warranty

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## **SAMSUNG LIMITED WARRANTY**

SAMSUNG Electronics America Inc. (SEA), warrants that this product is free from defective material and workmanship. SEA further warrants that if product fails to operate properly within the specified warranty period and the failure is due to improper workmanship or defective material, SEA will repair or replace the product at its option.

All warranty repairs must be performed by a SEA authorized service center. The name and address of the location nearest you can be obtained by calling toll free: 1-800 SAMSUNG (1-800-726-7864).

Labor

1 year

Parts

1 year

On carry-in models, transportation to and from the service center is the customer's responsibility.

The original dated sales receipt must be retained by the customer and is the only acceptable proof of purchase. It must be presented to the authorized service center.

## **EXCLUSIONS (WHAT IS NOT COVERED)**

This warranty does not cover damage due to accident, fire, flood and/or other acts of God; misuse, incorrect line voltage, improper installation, improper or unauthorized repairs, commercial use, or damage that occurs in shipping.

Exterior and interior finish, lamps, and glass are not covered under this warranty.

Customer adjustments which are explained in the instruction manual are not covered under the terms of this warranty.

This warranty will automatically be voided for any unit found with a missing or altered serial number. This warranty is valid only on products purchased in the United States and Puerto Rico.

Some States do not allow the exclusions or limitations of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from State to State.



## QUESTIONS OR COMMENTS?

COUNTRY	CALL	OR VISIT US ONLINE AT	WRITE
IN THE US	1-800-SAMSUNG (726-7864)	<a href="http://www.samsung.com">www.samsung.com</a>	Samsung Electronics America, Inc. 85 Challenger Road Ridgefield Park, NJ 07660-2112



### RoHS compliant

Our product complies with "The Restriction Of the use of certain Hazardous Substances in electrical and electronic equipment", and we do not use the 6 hazardous materials- Cadmium(Cd), Lead (Pb), Mercury (Hg), Hexavalent Chromium (Cr +6), Poly Brominated Biphenyls (PBBs), Poly Brominated Diphenyl Ethers(PBDEs)- in our products.